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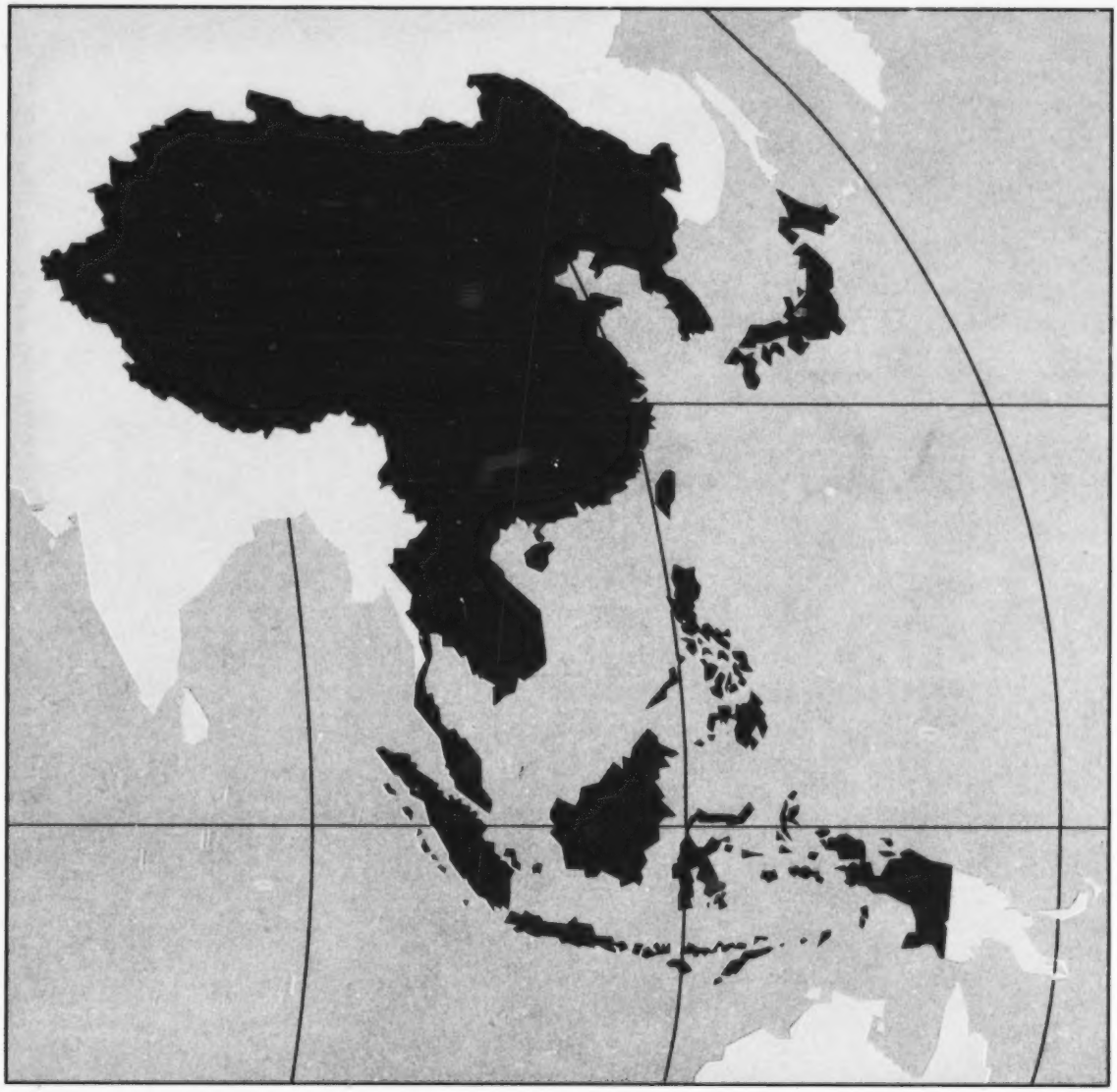

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— KAERI Head Calls for Restructuring ROK's Nuclear Industry
— Cooperation Between Rival South Korean Enterprises Booming
— Mekong Delta Paddy Prices Decline Steadily

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The **PACIFIC RIM ECONOMIC REVIEW** is a subseries of the Survey Series. The **REVIEW** is published biweekly by East Asia Group and contains a selection of reports on economic topics appearing in foreign newspapers, magazines, and journals, as well as radio, television, press agencies, and data base sources, primarily from the countries of the Pacific Far East. Material is presented alphabetically by geographic area, and then arranged alphabetically by topic where possible. All articles in the **REVIEW** are summaries of original foreign media reports and are presented in two formats: "Feature" articles, which either summarize a lengthy report from a single source or summarize media reports on the same subject appearing in more than one foreign media source; and shorter summaries of news reports, usually from one source.

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4 May 1994

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JAPAN

Economic Trends

Japanese Manufacturers React to Higher Prices of Imported Pulp

Major Japanese paper manufacturing companies have "voiced their disapproval" over announcements by several North American and European pulp companies that pulp export prices for May will rise about 13 percent higher than April prices, according to the 6 April NIHON KEIZAI SHIMBUN (NIKKEI). Japanese paper companies will most likely "accept the situation" because securing raw materials such as pulp is a major priority for them.

According to NIKKEI, Japanese paper companies reported that the U.S. firms Georgia-Pacific and Stone Container Corporation were the first to announce higher prices. The U.S. firms are raising prices on leaf-bleached kraft pulp to $490 or $500 a ton and on needle-bleached kraft pulp to around $520 a ton. NIKKEI added that one European pulp company, Enso-Gutzeit, has also announced that May prices for both types of pulp will be 12 to 13 percent higher than April prices.

NIKKEI noted that international pulp prices remained at depressed levels until late last year, while declining industry profits resulted in reduced production levels worldwide. Since supply has fallen to match depressed demand, consumers are rushing to buy pulp for fear of rising prices. This in turn has rapidly pushed market prices back up.

The 10 April NIKKEI SANGYO SHIMBUN reported that Japanese paper manufacturers are "objecting" to the 10 percent price rise for June pulp exports announced by major Canadian pulp companies. According to Japanese industry circles, the Harmac Division of Macmillan Bloedel and the Avenoir Co., a company spun off from Canadian Pacific Forest Products, have announced June prices for needle-bleached kraft pulp of $560 per ton, $50 higher than May prices. NIKKEI SANGYO noted that Canadian pulp prices overall have risen 47 percent since the end of last year.

Canadian pulp companies currently account for 40 percent of Japan's pulp imports, the highest share among foreign countries, according to NIKKEI SANGYO. Canada has already reduced pulp processing activities because of the slump in the pulp market, and impending labor strikes in the Canadian paper industry could result in higher pulp prices.

According to NIKKEI SANGYO, some Japanese industry officials believe that higher prices for raw materials such as pulp will push up the domestic prices of paper products, although they believe the rise will not be as rapid as the increase in pulp prices.

Daishowa Paper To Import More Pulp From Canada

Despite the higher price of imported pulp, according to the 13 April NIKKEI, Daishowa Paper Manufacturing, Japan's second largest paper manufacturer, plans to rely on imported pulp from its Canadian joint venture company, the Kennel River Pulp Co. This is because the domestic price of pulp is considerably higher even than imported pulp and because the high costs of processing have dramatically reduced the operational efficiency of Daishowa's Fuji plant, which is in Shizuoka Prefecture. The company will gradually close down and eventually sell

off the western block of its Fuji plant to reduce its debt obligations, as part of a restructuring program which was announced in March. Beginning in June, the company will suspend pulp processing activities in the western block, which produces medium-grade and dyed paper products. Daishowa will then suspend and transfer paper production operations in the western block to another plant.

NIKKEI reported that the price gap between imported and domestic pulp has widened further with the yen's appreciation. By importing 30,000 tons of pulp annually, Daishowa can save an annual 1 billion yen ($9.7 million) in total processing costs and 600 million yen ($5.8 million) annually on the costs of raw materials alone.

Financial Issues

Securities Industry, MOF Encouraging Asian Equity Investment

The Japan Securities Dealers Association has decided to register China's Shenzhen Stock Exchange as a "designated foreign securities exchange," according to the 19 April NIKKEI KINYU SHIMBUN. The move will allow individual Japanese investors to begin trading stocks of Chinese state-run companies listed on the Shenzhen exchange through Japanese securities companies on Japan's over-the-counter market. The association's decision closely follows a similar decision in March to register the Shanghai Stock Exchange as the first designated foreign securities exchange in China.

Previously, Chinese stocks could be purchased in Japan, but only if they were listed on a "designated" exchange in Hong Kong or New York, according to the 4 March MAINICHI SHIMBUN. The move opens the way for Chinese state-run companies to list their stocks on domestic Japanese exchanges, MAINICHI reported, because the Ministry of Finance (MOF) will consider listing Chinese stocks on the Tokyo and Osaka exchanges once a performance track record on the over-the-counter market has been established. Designating the Chinese exchanges increases opportunities for Japanese investment in Chinese equities.

On the domestic front, the Tokyo Stock Exchange is considering relaxing listing standards on its foreign section to encourage Asian firms to list there, according to the 21 April NIKKEI KINYU. Issues the exchange must address include: revising net asset requirements to allow the small-capital Asian firms to list and alleviating the cost of submitting Japanese-language documents required for listing, such as annual reports. The amount of time a firm must be listed on its home exchange before it can list in Japan is also being reconsidered, according to the 5 April NIKKEI KINYU. To this end, the exchange dispatched two teams to Asia in March to study local regulations, such as accounting and oversight systems.

To facilitate direct Japanese investment in South Korean stocks and bonds, the MOF has decided to make an exception to Japan's foreign currency exchange controls, according to the 9 April NIHON KEIZAI SHIMBUN (NIKKEI). Previously it was all but impossible for a Japanese investor to trade South Korean stocks directly from Japan because of a discrepancy in Japanese and Korean currency exchange policies--Japan's policy does not allow direct yen transfers abroad, while Korean policy is to allow yen into the country through direct transfers. As a result, direct Japanese investment in South Korea has been limited and has always been channeled through a third country.

The MOF will make an exception by allowing domestic Japanese investors who have opened yen-won accounts at Korean banks to send funds from an account at a domestic foreign exchange bank to a South Korean yen account through a securities company to clear the funds. The MOF will authorize two securities companies with branches in Seoul to handle these transactions, and a system is expected to be in place for brokering Korean equity investments by the beginning of May. With this MOF initiative, the NIKKEI observed, capital will be allowed to flow between the two countries and "the way toward investment in South Korea will be opened."

Meanwhile, the Nihon Keizai Shimbun Co. has for the first time granted a license to a foreign stock exchange which authorizes that exchange to list futures and options based on its new Nikkei 300 Stock Index. The index is based on 300 representative issues listed on the Tokyo Stock Exchange. The newly licensed foreign exchange, the Singapore International Monetary Exchange (SIMEX), will begin listing Nikkei 300-based instruments within the next few months, according to the 7 April NIKKEI KINYU SHIMBUN. SIMEX already lists futures and options based on the Nikkei 225 Stock Index.

In this connection, Tomomitsu Oba, president of the Japan Center for International Finance, has been appointed an "outside advisor" to SIMEX to enhance the exchange's relationship with the MOF and the finance and securities industries in Japan, according to the 31 March NIKKEI. Oba was formerly vice minister of finance for international affairs and still has strong connections with the MOF and financial circles in Japan.

Nippon Trust Bank: Introducing New Type of Financial Restructuring

An analysis in the 21 April NIHON KEIZAI SHIMBUN (NIKKEI) reported that Mitsubishi Bank, Japan's fifth largest commercial bank, has begun "comprehensive assistance" to Nippon Trust Bank, the smallest of Japan's seven trust banks. It stated that the commercial bank's assistance to the trust bank could be the harbinger of a new type of financial restructuring because it may entail reorganization through one of two new methods in the 1993 Financial System Reform Law that have not been used to date--a merger of a commercial and a trust bank, or having an existing trust bank become a subsidiary of a commercial bank.

Nippon Trust Bank has been weakened by nonperforming assets that amounted to 85.2 billion yen ($811 million) as of the end of September 1993 and by "irretrievable assets" that totaled 14 billion yen ($133 million) by the end of FY93. Given the close ties between Mitsubishi Bank and Nippon Trust, the Ministry of Finance (MOF) and Mitsubishi Bank began deliberating assistance to Nippon Trust late in 1993, and came up with a plan that included dispatching Mitsubishi personnel to Nippon Trust. Four consecutive Nippon Trust presidents have come from Mitsubishi and Mitsubishi is Nippon Trust's second largest stockholder. Currently, the MOF is conducting an audit of Nippon Trust, and an assistance plan will be finalized in mid-May.

One proposal for assistance that is gaining strength is for Mitsubishi to provide Nippon Trust with deposits for an initial period, and then, if necessary, make Nippon Trust a subsidiary by purchasing additional stock. A variation on this proposal would entail Mitsubishi purchasing new Nippon Trust stock immediately, without extending deposit assistance. Whether Mitsubisni purchases Nippon Trust immediately or not will depend upon the results of the MOF audit and an agreement between the MOF and Japan's Fair Trade Commission.

The analysis observed that the Financial System Reform Law, which allows banks and securities companies to establish subsidiaries to enter financial sectors previously closed to them,

enables Nippon Trust to restructure by becoming the subsidiary of Mitsubishi Bank, and that this will be the first example of this type of restructuring. While commercial banks have been preparing to establish trust banking subsidiaries, Mitsubishi is said to have cancelled plans to do so since it is in the midst of providing assistance to Nippon Trust. If Mitsubishi were to establish an entirely new trust banking subsidiary, as other commercial banks are doing, it would not be able to engage in the lucrative pension fund business itself. However, by holding more than 50 percent of Nippon Trust's stock, Mitsubishi would control a subsidiary that could engage in the full range of trust banking operations, including pension fund management.

The NIKKEI analysis observed that Mitsubishi's approach could spawn a restructuring of Japan's beleaguered financial system that breaks down barriers between commercial, trust, and other financial operations and could "influence future strategies of commercial banks" as they prepare to establish trust subsidiaries.

FTC To Promulgate Stockholding Guidelines

Japan's Fair Trade Commission (FTC) is currently devising criteria for screening the amount of stock a bank can hold in another company. Under the Antimonopoly Law, a financial institution cannot hold more than 5 percent of another company's stock, and must obtain FTC approval to hold a higher percentage. Banks and financial institutions are urging the FTC to disclose its criteria for permitting stockholding in excess of 5 percent as they prepare to establish trust and securities subsidiaries in diversifying their operations. The FTC has decided to clarify these standards and will announce them in the summer of 1994.

As a rule, the FTC will allow banks to hold stock in excess of 5 percent when it determines that no concerns exist that the financial or other markets will be "dominated" by them. Specifically, it will disclose its criteria for such authorizations when a financial institution establishes a subsidiary either to enter a completely separate financial sector or conduct business that is ancillary to its core lending business, such as branch management or electronic clearing systems. (Tokyo NIHON KEIZAI SHIMBUN 15 Apr 94 p 7)

Foreign Trade and Investment

CHINA

Iwatani International To Expand Industrial Gas Production Network

Iwatani International, Japan's largest LPG dealer, and the Shanghai Petrochemical Industrial Co., China's largest producer of industrial gases, will establish a joint venture company in Shanghai to produce carbon monoxide and propane. The new company, Shanghai Petrochemical Iwatani Gas Development Co. Ltd., will be capitalized at $3.59 million, with Iwatani International and Shanghai Petrochemical each contributing 40 percent and Iwatani Gas and Shanghai Jindong Petrochemical Industrial Development Co., a subsidiary of Shanghai Petrochemical, each investing 10 percent. The joint venture company will build a plant in Shanghai by the summer of 1995 with a production capacity of 3,600 tons of propane and 30,000 tons of carbon monoxide annually, making it China's largest manufacturer of carbon monoxide. The carbon monoxide will be used to refrigerate food and the propane sold for household use.

Iwatani has also decided to form joint ventures in Daqing, Heilongjiang Province, and Shenyang, Liaoning Province to produce industrial gases. It hopes to build a gas production network with annual sales of 20 billion yen ($190 million) by the year 2000. (Tokyo NIHON KEIZAI SHIMBUN 9 Apr 94 p 9)

Mikuni, NORINCO Subsidiary Establish Motorcycle Carburetor Company

Mikuni, an independent carburetor manufacturer, has signed an agreement with the Southwest Optical Instrument Factory, a precision instrument company belonging to the arms manufacturing conglomerate China North Industries Group (NORINCO), establishing a joint venture company to produce and market motorcycle carburetors. The joint venture firm, Sanguohong Optical Industry Co. Ltd., will be located in Chengdu, Sichuan Province, and will be capitalized at $8.6 million, with Mikuni investing 55 percent and Southwest Optical 45 percent. This is the first time a Japanese company has invested over 50 percent in an "automobile related" joint venture in China.

Total initial investment will be $20.5 million. A new plant will be completed in mid-1995, and should begin operations in 1996 with about 60 employees producing 750,000 carburetors valued at 2 billion yen ($19 million) in the initial fiscal year. Plans are for the workforce to expand to 400 and production to increase to 1.5 million carburetors valued at 4 billion yen ($38 million) annually by the year 2000.

Southwest Optical already makes automobile and motorcycle carburetors for Honda Motor, Yamaha Motor, and Suzuki using production technology provided by Mikuni in 1992. (Tokyo NIKKEI SANGYO SHIMBUN 18 Apr 94 p 11)

VIETNAM

Keidanren Group Attends Joint Economic Conference

On 6 April a Japan Federation of Economic Organizations (Keidanren) delegation attended the second "Japan-Vietnam Joint Economic Conference" held in Ho Chi Minh City, according to the 7 April NIHON KEIZAI SHIMBUN (NIKKEI). The delegation, consisting of 117 officials representing 60 corporations, was headed by Akira Nishio, chairman of Keidanren's Japan-Vietnam Economic Committee and president of the general trading company Nissho Iwai. The Vietnamese delegation of 140 government and business leaders was headed by Deputy Prime Minister Tran Duc Luong, and included Do Quoc Sam, chairman of the State Planning Committee.

The aim of the Japanese side was to urge Vietnam to improve its investment climate so as to promote Japanese investment, NIKKEI observed. Do Quoc Sam requested expanded Japanese investment, to which Chairman Nishio replied: "The reason for the small size of Japanese investment is due to problems in Vietnam's business climate."

In the conference proceedings, Keidanren reportedly spelled out improvements that must be made in five areas of Vietnam's economy in order to increase Japanese investment: 1) improvements in electricity supply, transport, communications, and other areas of the infrastructure; 2) improved commercial laws and development of the country's financial and capital markets; 3) simplified administrative procedures and making government approval and

supervision standards more precise; 4) revealing information concerning the management situation of Vietnamese joint venture partners; and 5) improving macroeconomic statistics.

According to the 6 April ASAHI SHIMBUN, Nishio and the Keidanren delegation paid a call on Do Muoi, general secretary of the Communist Party of Vietnam, on 5 April in Hanoi. Do Muoi specifically requested Japanese investment in Vietnam's machinery industry, the transfer of advanced Japanese technology, and the provision of business management know-how. Nishio replied: "Japan's investment in Vietnam lags behind that of other countries, but Japan will be the largest investor."

The third joint conference will be held in Tokyo in 1995, NIKKEI reported.

NEC To Build Communications System Linking Four Airports

NEC, a major manufacturer of communications equipment, has won a $1.9 million contract from the Vietnamese Government to build a dedicated communications system linking Vietnam's four major airports. Kanematsu, a general trading company, will be the main contractor for the project. NEC beat out France's Alcatel and other "influential" telecommunications companies in winning the contract.

The project will link Vietnam's four major airports--Hanoi (Noi Bai), Qui Nhon, Da Nang, and Ho Chi Minh City (Tan Son Nhat)--by installing two-way voice and data links for air traffic control via Indonesia's Palapa satellite. The system will also incorporate low-noise amplifiers, ground communications equipment, multiplex equipment, and a command and control system.

Building on this contract, NEC will attempt to win other contracts in Vietnam as the country develops its transportation and communications infrastructure. In the past, European firms such as Alcatel were strongest in Vietnam's telecommunications sector, but NEC has taken various steps, including opening a resident office in Hanoi, to develop business in Vietnam. Two particular areas NEC will target are supplying PBX equipment and fiber optic communications systems. (Tokyo NIKKAN KOGYO SHIMBUN 18 Mar 94 p 11)

Japan-U.S. Trade Issues

Draft of MITI Report on Unfair Foreign Trade Practices Revealed

The 1 April NIHON KEIZAI SHIMBUN (NIKKEI) has reported on the contents of the draft of the Ministry of International Trade and Industry (MITI) FY94 Report on Unfair Foreign Trade Practices, which is Japan's counterpart to the United States Trade Representative's (USTR's) annual report on foreign trade barriers. The draft report was prepared by MITI's Industrial Structure Council. The final report is due in May. According to NIKKEI, the draft classifies the unfair trade practices and policies of Japan's major trade partners into thirteen categories, such as quantitative import restrictions, anti-dumping measures, and export subsidies. The draft cited the United States as having unfair trade practices and policies in nine categories, South Korea in five, and the European Union (EU) in four. According to NIKKEI, the Industrial Structure Council judged the "unfairness" of specific trade practices based on the agreement resulting from the GATT Uruguay Round negotiations and "basic principles of international law."

According to NIKKEI, the draft emphasized problems associated with U.S. trade policies, such as unilateral actions, "abuse of anti-dumping measures," and "buy-American policies" in government procurement. In particular, the draft "strongly criticized" reinstitution of the Super 301 provision in the U.S. Omnibus Trade Law and the financial retaliation bill currently being debated in Congress. The draft went on to criticize the U.S. practice of demanding that its trade partners set numerical import targets for lacking "economic rationality and violating the spirit of the GATT."

According to the 5 April YOMIURI SHIMBUN, MITI has decided to include in the FY94 Report on Foreign Unfair Trade Practices the U.S. Government's practice of using the multinational corporation clause of the U.S. Customs Law to charge foreign firms with dumping. The decision was in reaction to the U.S. Department of Commerce's (DOC's) recent charge that the Dutch subsidiary of Japan's Fuji Photo Film was dumping color photo paper on the U.S. market. According to YOMIURI, the DOC cited the multinational corporation clause as its rationale for using the production cost of Fuji Photo Film in Japan rather than that of the company's subsidiary in the Netherlands in imposing a high tariff rate of 321.23 percent on the Dutch subsidiary's shipments to the United States.

The 1 April NIKKEI added that the draft urged the Japanese Government to utilize GATT, or its successor, the World Trade Organization, to counter U.S. unilateral actions and numerical targets. To prevent the United States from resorting to such trade measures or policies, the draft also urged the Japanese Government to make its own procurement process transparent, remove nontariff barriers, and promote further deregulation in Japan.

Concerning China and Taiwan, which are preparing to join GATT, NIKKEI reported that the draft requests China to make its trade systems and laws "internally consistent and transparent" and to lower tariff rates and quantitative import restrictions. The draft requests Taiwan to lower tariff rates and to reduce its export subsidies.

BOJ Governor Mieno's Concern Over 'Positive' Macroeconomic Policies

In a speech at the Foreign Correspondents Club of Japan on 19 April, Bank of Japan (BOJ) Governor Yasushi Mieno expressed concern that pressure to reduce Japan's large current account surplus may lead the Japanese Government to adopt looser macroeconomic policies, in particular, a more expansive fiscal policy and a more relaxed monetary policy, according to the 20 April ASAHI SHIMBUN. Mieno argued that because Japan's large current account surplus is a "reflection of the high saving rates" of the Japanese people, "macroeconomic policies alone cannot reduce the surplus." Instead, Mieno continued, "overly positive" macroeconomic policies tend to "cause inflation." He also said that adoption of "short-sighted" means, such as increased government spending or a lower official discount rate, is a "very questionable approach" to reducing Japan's surplus.

The 20 April YOMIURI SHIMBUN reported that, in his speech, Mieno rebutted foreign criticism that Japan's large current account surplus is bad for the world by stating that a current account surplus or deficit had "nothing to do with virtue or vice." Mieno stated that the important factor is whether a "country with a current account deficit can control its cash flow and eliminate its deficit based on a rational repayment schedule." Mieno cited the example of some East Asian countries to show how Japan's surplus has been constructive. He said that those East Asian countries which have had current account deficits imported Japanese capital in the 1980's to promote investment and technical innovation and have been able to continue developing their economies in the 1990's.

Mieno concluded it will be difficult to reduce Japan's current account surplus in a short time period, according to the ASAHI article. Mieno stated that "steady" efforts, such as "proper management of macroeconomic policies, improving market access, deregulation, and improving infrastructure," were needed to reduce Japan's surplus, even though such efforts might take a long time to produce results.

Matsunaga Recommends Government Change Tactics in Trade Talks

In recent comments, a prominent Japanese official has urged Japan to take a more proactive approach in working out its trade differences with the United States. Speaking at the Asia Institute, a private research organization he heads, on 20 April, Nobuo Matsunaga, the Japanese Government Representative for External Economic Affairs and former ambassador to the United States, urged the Japanese Government to "change its tactics to take the initiative to persuade the United States of Japan's positions," rather than responding to the United States in the Japan-U.S. framework talks, according to the 21 April ASAHI SHIMBUN. Matsunaga emphasized voluntary efforts on Japan's part to open its markets and reduce its trade surplus with the United States. Specifically, according to ASAHI, he urged the government to include "solid" economic structural reform plans and market opening measures in the package it plans to announce by the end of June. Matsunaga visited Washington in early April to meet United States Trade Representative (USTR) Mickey Kantor, National Economic Council Chairman Robert Rubin, and National Security Council Chairman Anthony Lake to informally explore ways to reopen the framework talks.

According to the 21 April MAINICHI SHIMBUN, Matsunaga attributed the breakdown of the framework talks in February, at least in part, to "misjudgment" on the part of the Japanese Government. According to Matsunaga, the Japanese Government "judged that the U.S. Government in the end would favorably evaluate the Japanese Government's efforts to resolve trade frictions with the United States," and did not actively try to persuade the United States of Japan's positions.

Regarding U.S. strategies in the framework talks, Matsunaga provided his assessment that the U.S. Government is "shifting the focus of the framework talks from sector-specific issues to macroeconomic policies," according to the 21 April YOMIURI SHIMBUN. To support his assessment, Matsunaga quoted USTR Kantor as saying that Japan-U.S. relations would "not escape gridlock unless Japan takes macroeconomic measures and sustains economic growth led by domestic demand." The paper reported that Matsunaga added that it was his perception that U.S. negotiation strategies had been "firmed up to center on macroeconomic policies." According to Matsunaga, USTR Kantor told him that "sector-specific issues must be resolved, but that negotiations on macroeconomic policies were most important."

The 21 April SANKEI SHIMBUN also reported that based on USTR Kantor's remarks, Matsunaga urged the Japanese Government to include income tax cuts and additional public works spending in the June package of economic structural reform plans and market opening measures. Matsunaga implied that Japan "needs to make concessions" in the macroeconomic realm in order to resolve the framework talks successfully without committing to numerical targets. He said "Japan should reject numerical targets, but rejection alone could not conclude diplomatic negotiations." At the same time, Matsunaga also expressed his concern that the new government may not have enough time to formulate macroeconomic policies centering on income tax cuts and additional public works. Matsunaga pointed out that the new government must first deliberate and pass the overdue FY94 budget bill.

FEATURE: JMTBA Creates New Machine Tool Market Forecast Model

The Japan Machine Tool Builders' Association (JMTBA) has created a mid-range market forecasting model for machine tools to measure progress in reforming the industry's "supply and demand structure," according to press reports. The JMTBA's other forecasting model, the machine tool recapitalization-cycle model, indicates that domestic demand will double in 1994, a trend not supported so far this year by actual market data.

According to the 25 March NIKKAN KOGYO SHIMBUN, the JMTBA has compiled a five-year forecast for machine tool orders to serve as an index for gauging progress in "reforming supply and demand" in the machine tool industry. Data for this model comes from intermediate range economic forecasts by the Nomura Research Institute, the Research Institute on the National Economy, Mitsubishi Research Institute, as well from private capital investment and mining and manufacturing indices. The 25 March NIKKEI SANGYO SHIMBUN added that the forecast uses theoretical macroeconomic values from a multiple regression analysis model to establish the upper limit of domestic demand, and then subtracts the standard deviation from these values to obtain the lower limit.

According to NIKKAN KOGYO, the model projects that domestic machine tool demand will increase between 5.0 and 80.3 percent, or between 341.1 billion yen ($3.25 billion) and 585.9 billion yen ($5.58 billion) in 1994, and to between 522.1 billion yen ($4.97 billion) and 800 billion yen ($7.62 billion) by 1997. For the five-year period 1993-1997, cumulative domestic demand is forecast to be 2.1278 trillion yen ($20.26 billion). To reach this total, yearly averages must be between 425.6 billion yen ($4.05 billion) and 611.5 billion yen ($5.82 billion).

NIKKEI SANGYO contrasted these figures with projections using the JMTBA's machine tool recapitalization-cycle model, which assumes a replacement period of 8.5 years. This model predicts that domestic demand--production minus exports and adding imports--will double from the 1993 level of 311 billion yen ($2.962 billion) to 631.9 billion yen ($6.02 billion) in 1994 and reach 774.1 billion ($7.372 billion) in 1997. JMTBA-compiled figures, however, show that domestic orders were down 28 percent and 24 percent in January and February 1994, respectively, and in the industry the prevailing opinion is "the first half of 1994 will be about the same as the second half of 1993, with orders finally picking up a little in the second half."

Toyo Seimitsu Entering Korean Gear-Cutting-Machine Market

Toyo Seimitsu Kogyo, a machine tool and auto parts manufacturer affiliated with the Toyota Motor Group, has signed a contract with the U-Sin Machine Industry Company, a machinery manufacturer in the Hyundai Group that specializes in hypoid-gear-cutting machines, to provide it with Toyo Seimitsu's manufacturing technology for gear tooth chamfering machines. U-Sin will use this technology to manufacture chamfering machines for Hyundai Motor Company. Toyo Seimitsu will also hold technical exchange meetings with Korean auto companies.

Toyo Seimitsu decided to expand into the Korean market, where auto sales are spurring capital investment, because its high reliance on the domestic market caused it to be hit hard by the slump in domestic auto sales. However, because the U.S. company Gleason Corporation

has a large share of the Korean gear-cutting-machine market, Toyo Seimitsu chose to begin by providing technology to U-Sin and holding technical exchange meetings with Korean auto companies, such as Hyundai Motor and Daewoo Motors. Toyo Seimitsu hopes to use these meetings to stimulate deeper technical cooperation and gain good "PR" for its technology. The first technical exchange meeting was held in Korea and the second meeting is scheduled to be held this fall in Japan in conjunction with the Japan Machine Tool Exhibition. (Tokyo NIKKAN KOGYO SHIMBUN 14 Apr 94 p 13)

Semiconductors/Computers/Electronics

FEATURE: Nikon, Canon Dominate World Stepper Market

Nikon Corp. and Canon Inc., which together control 90 percent of the world's market for stepper equipment used to manufacture semiconductors and liquid crystal displays (LCDs), are strengthening their technological domination of the industry, according to media reports. In the race to develop next-generation steppers, however, one competitor could be Matsushita Electric Industrial Co., which has developed an excimer laser stepper it feels is more efficient than similar steppers developed by Nikon and Canon.

Two Firms Dominate 'Critical' Stepper Market

Nikon and Canon control nearly 90 percent of the 100 billion yen ($1 billion) annual world market for stepper lithography equipment, according to the 30 March NIHON KEIZAI SHIMBUN (NIKKEI). Nikon has about a 70 percent share of Japan's market and Canon the remainder. According to the 12 February NIKKEI SANGYO SHIMBUN, steppers, used to print circuit patterns on silicon wafers, are "critical" to the manufacture of semiconductors and LCDs. For the most part, semiconductor manufacturers currently use "i-line" steppers to produce 4, 16, and--soon--64 megabit (M) dynamic random-access memory (DRAM) chips.

The 16 March NIKKAN KOGYO SHIMBUN stated that the stepper market in reality is an "oligopoly" of Nikon and Canon. The paper explained that the cost of stepper development has mushroomed while economic recession has hit the semiconductor manufacturing equipment industry particularly hard. Until last year Hitachi was the only Japanese semiconductor manufacturer to also produce and sell steppers, but it had to "withdraw" from stepper operations because it could not make a profit. [For reporting on Hitachi ending its stepper production, see the 31 June 1993 *Pacific Rim Economic Review*, Vol 2, No 13, page 15.] According to NIKKAN KOGYO, this has left the domestic market "monopolized" by Nikon and Canon and has made it "very difficult" for new entrants.

In addition, there is little international competition. The 16 February NIKKEI SANGYO reported that an American firm, GCA, which was a leading stepper maker in the 1980s, dropped out of the market last year. Further, the 16 February NIKKAN KOGYO reported that the only remaining U.S. manufacturer, SVG Lithography Systems (SVGL), has agreed to sell Canon the rights to manufacture and sell its most advanced equipment in Japan. According to the paper, SVGL could no longer cope with its huge research and capital investment costs, so it approached Canon for a deal that also includes joint research and development. This agreement occurred

despite SVGL's membership in Sematech, the U.S. Government-sponsored consortium that helped SVGL develop its technology, NIKKAN KOGYO observed.

Recovering Demand Boosting Stepper Sales

The 30 March NIKKEI reported that Nikon and Canon will greatly expand stepper production in FY94. Demand has been brisk in the United States and South Korea, and it appears to be recovering in Japan. In FY93 Nikon registered an 80 percent increase in stepper sales to more than 350 units, of which 215 were for LCD production. According to NIKKEI, this was Nikon's first sales increase in five years, and its Kumaga plant in Saitama Prefecture has been running at "full capacity" since last summer. Nikon expects a 20 percent sales increase in FY94 to over 420 steppers, of which over 60 percent will be exported.

According to NIKKEI, Canon has not revealed the number of steppers sold in FY93, but its Utsunomiya plant in Tochigi Prefecture is also running at full capacity and Canon is projecting increased sales of between 50 to 60 percent in FY94. Due to "delivery lead times" of between six to eight months for steppers, Canon's sales plans "for the most part" have been set until December, with nearly 70 percent destined for export, NIKKEI stated.

Taking Steps To Mitigate Next Downturn

Despite increases in FY93 and expectations of higher sales in FY94, both Nikon and Canon are taking steps to protect themselves from the "ups and downs of the silicon cycle," in which stepper demand "crashes" until the semiconductor companies are ready to invest in the production of next-generation chips, the 21 February NIKKAN KOGYO SHIMBUN reported. "To maintain cash flow stability and operational continuity," Nikon and Canon are preparing to offer stepper "make-over" services which will allow semiconductor makers to upgrade steppers already in use on production lines. Thus, the paper stated, the two firms will have a source of regular income during the "down" years in the silicon cycle, while semiconductor makers will be able to improve "investment efficiency."

According to NIKKAN KOGYO, Nikon plans to begin its "function upgrade operations" this autumn. The company plans to create a menu of over 20 "services" it can perform on a variety of models, such as revising the stepper's management software, reducing exposure irregularities, and speeding up reticle alignment. The paper reported that Nikon has sold over 3,000 steppers, nearly all of which can be "targeted" for upgrade. Consequently, Nikon hopes to earn over 3 billion yen ($28.5 million) from upgrade services in FY94.

Canon is also preparing to offer similar upgrade services as part of its sales-and-service contracts, according to NIKKAN KOGYO. Previously, service contracts were merely a guarantee to fix problems, but now Canon plans to include a menu of upgradable functions for existing steppers. A Canon official stated that their service menu options should be comparable to Nikon's upgrade services.

Moving Fast To Remain Technologically Competitive

Since i-line steppers have nearly reached their technological limit, Nikon and Canon are moving quickly to develop new stepper technologies. The 12 February NIKKEI SANGYO reported that the miniaturization of semiconductors is proceeding rapidly, so it is "crucial" for Nikon and Canon to introduce new technologies as soon as possible to remain competitive.

According to the February 1994 issue of NIKKEI MICRODEVICES, Nikon has developed and is preparing to market a krypton-fluoride (KrF) excimer laser stepper that can print circuit patterns at a width of 0.32 microns, which is suitable for mass producing 64M DRAMs. The magazine reported that Nikon's "NSR-2005EX10B" stepper might also be used to produce 256M DRAMs if its resolution is increased by the "SHRINC" illumination-modification method. Nikon hopes the machines will be used to produce the "second generation" of 64M DRAMs, but according to NIKKEI MICRODEVICES, some semiconductor makers complain that the price--between 400 and 450 million yen ($3.9 and $4.3 million)--is too high compared to current i-line steppers, which are 30 to 50 percent cheaper.

Another article in the same issue of NIKKEI MICRODEVICES reported that Canon has delayed the commercialization of its "advanced KrF stepper." The firm would not comment on the reason for the postponement, but instead revealed its pending agreement with SVGL to develop "mirror-scan" steppers that use reflections from mirrors to form circuit patterns. According to the 16 February NIKKAN KOGYO, Canon has already developed a stepper that can be used to produce 64M DRAMs, but the company has decided that SVGL's mirror-scan stepper could become the principal stepper used in 256M DRAM production. In addition to its ability to print extremely minute circuit patterns, SVGL's stepper can be used on larger sized wafers that are expected to be used in production soon. In Japan this stepper will sell for 450 million yen ($4.3 million).

MEIC Plans To Market New Excimer Stepper Laser

A great deal of research and development is still required for equipment to mass produce 256M DRAM chips and even more advanced chips, according to the 12 February NIKKEI SANGYO. Thus, it is not clear which stepper technology will emerge as the "mainstream." One new competitor could be Matsushita Electric Industrial Co. (MEIC), one of the core companies of the Matsushita Group, according to the 16 March NIKKAN KOGYO. MEIC plans to enter the market for KrF excimer laser steppers that will be used to produce 256M DRAMs. On 15 March, the group's research subsidiary, Matsushita Giken, announced that its Osaka Semiconductor Research Center had completed development of a KrF excimer laser stepper capable of printing circuit patterns as narrow as 0.25 microns. While Nikon and Canon purchase their excimer lasers from a U.S. firm, Cymer Laser Technologies Corp., Matsushita Giken claims that its internally developed lasers have greater stability and a longer life span, the paper reported. NIKKAN KOGYO observed that MEIC's stepper could pose a threat to Nikon's and Canon's hold on the market. It quotes an industry analyst as saying that if MEIC does sell steppers outside the Matsushita Group, it could "blow a hole" in Nikon and Canon's "monopoly."

NEC, Fujitsu To Build Supercomputers With CMOS Processors

NEC Corp. and Fujitsu Ltd. are making "drastic" changes in the basic design of their supercomputers. As a result of corporate downsizing efforts, both companies have decided to build new supercomputers with "inexpensive" complementary metal oxide semiconductor (CMOS) processing chips that will be compatible with existing equipment and software. NEC and Fujitsu expect this move alone to improve cost efficiency by more than five times. Both firms plan to introduce next generation machines based on the new designs by mid-1995.

NEC and Fujitsu are changing their designs because they realized that their current supercomputers which use bipolar-based processors cannot compete with U.S.-made parallel processing supercomputers with RISC-based processors and extremely efficient UNIX servers.

Consequently, both firms are developing new parallel processing supercomputers loaded with "dozens" of CMOS processors. CMOS chips are attractive because they can be made to be both small in size and energy-efficient, while their development and manufacturing costs can be tightly controlled.

NEC will load CMOS processors on all succeeding models of its current SX-3R series supercomputer. Using the "close coupling method," NEC will be able to load up to 32 CMOS processors for a maximum vector processing speed of 2 billion floating point operations per second. Fujitsu will load CMOS processors on all its lower- and middle-end VPP500 series supercomputers, but will continue to equip its higher-end VPP500s with gallium arsenide large-scale integrated circuits. (Tokyo NIKKAN KOGYO SHIMBUN 1 Apr 94 p 1)

Cray Research Japan Sells Mini-Supercomputers

Taisho Pharmaceutical Co.--Cray Research Japan has delivered an EL92 mini-supercomputer to Taisho Pharmaceuticals. It is the first Cray supercomputer ordered by a Japanese pharmaceutical company. Taisho will use the supercomputer as a high-speed server in the research and development of new drugs at its general research center in Omiya City, Saitama Prefecture.

At the low-end of Cray's supercomputer series, the EL92 system delivered to Taisho has two processors, each capable of running at 133 million floating point operations per second, and possesses a 512-megabyte memory capacity. The value of the order was not revealed, but base EL92's usually sell for about 33.5 million yen ($320,000). (Tokyo NIKKAN KOGYO SHIMBUN 14 Apr 94 p 8)

Chiba University--Cray Research Japan won a bid from Chiba University for a computer education system that includes eight EL92 mini-supercomputers. Canon Sales and Cannon Supercomputing S.I. were co-bidders with Cray. The contract is worth about 500 million yen ($4.75 million) and will be paid with funds from the Japanese Government's second FY93 supplemental budget.

The university is in the process of building a new computer system and by FY95 plans to require all 2,800 incoming freshmen to take a course in computers and information processing. This is the first time Cray supercomputers will be used in a university-based "information processing" education system. The order includes eight EL92 mini-supercomputers, one CS6400 UNIX-based computer for information management, and 211 terminals. (Tokyo NIHON KEIZAI SHIMBUN 14 Apr 94 p 12)

Hitachi To Market Massively Parallel Processing Supercomputer

Hitachi is planning to introduce a massively parallel processing (MPP) supercomputer equipped with "general purpose" reduced instruction set computer (RISC) processors by mid-1995. The new supercomputer will meet the growing need for faster processing speeds while improving cost efficiency "well above" existing models. Although U.S. firms lead the field of MPP supercomputers, Fujitsu and NEC are close behind. With Hitachi's entry into the market, competition should intensify.

The company plans to market an MPP supercomputer that will contain more than 1,000 Hewlett-Packard PA-RISC processors and can achieve operating speeds of 300 billion floating point operations per second, a ten-fold increase over the firm's current S-3000 series supercomputers.

Hitachi also plans to commercialize a mini-supercomputer equipped with 128 PA-RISC processors and a parallel processing mainframe computer holding up to 128 CMOS processors. These developments are a part of the firm's plans to "rapidly expand" its range of parallel processing computers to meet both scientific and business needs. (Tokyo NIKKAN KOGYO SHIMBUN 14 Apr 94 p 8)

CHINA

Domestic Developments

New Regulations Issued on Rural Enterprise Income Tax

The State General Administration of Taxation has issued new rules regarding rural enterprise income tax. Income tax on new rural enterprises will be reduced or remitted for one year. New enterprises that engage in feed production or processing are exempt from income tax for three years. Rural enterprise income tax will be calculated based on an eight-grade progressive tax rate. Income from sales of rural enterprises engaged in feed processing and income from electric power sales by small hydropower stations are exempt from income tax. Enterprises that produce products directly serving the fertilizer or pesticide industry are exempt from income tax for three years. (Harbin HEILONGJIANG RIBAO 24 Mar 94 p 8)

Sichuan To Focus on Developing Products Promising Quick Results

In the next four years, Sichuan will focus its efforts on developing eight major competitive products, including steel products, color television sets, videocassette recorders, and telecommunications equipment, which require more extensive use of technology and promise quick results and which will generate one billion yuan or more in profits and taxes on a total sales income of over 10 billion yuan. The provincial party committee and government have decided that the provincial plan will emphasize the use of technological transformation loans of various financial institutions to develop such products. Efforts should be made to attract more foreign investment to develop these products, and the establishment of processing factories and shops for such products overseas is encouraged. (Chengdu Sichuan People's Radio Network 1100 GMT 14 Apr 1994)

Electronics Industry Output Up 35.4 Percent in First Quarter

Electronics industry output reached $4.1 billion in the first quarter, up 35.4 percent over last year, while sales rose 38.5 percent to $3.2 billion, according to the Ministry of Electronics Industry. In 1993 expansion was 26.4 percent. Consumer electronics products output, stimulated by booming sales, rose 27 percent, and product investment rose by 21.5 percent. In January and February output of color televisions rose 77.8 percent to 1.6 million, while output of videocassette recorders and radio and tape recorders increased by 35.7 and 15.6 percent respectively. Foreign-funded enterprises grew 75.7 percent, exceeding state firms' 28.2 percent gain. However, there are some problems that may have negative consequences. Many businesses are short of capital. Costs are rising, mostly caused by more expensive imported components and devaluation of the yuan. The new tax system has placed a heavier burden on most electronics enterprises, and the number of enterprises in the red is rising. (Beijing CHINA DAILY 26 Apr 94 p 2)

Hong Kong Exports, Re-exports Said To Reflect Mainland Economic Slowdown

Re-exports rose 12 percent to HK$71.1 billion last month, compared with March last year, government statistics show, but over the same period, the trade deficit rose more than HK$3 billion to HK$9.2 billion. Domestic exports fell HK$1.4 billion, or 8.2 percent, to HK$15.9 billion during the month. Total exports--re-exports and domestic exports--increased HK$6.2 billion, or 7.7 percent, to HK$87.1 billion. Economists attribute the decline in domestic exports chiefly to the slowdown in the mainland economy. Hong Kong Bank economic adviser Jim Wong said: "These results are continuing the trend we have seen since the fourth quarter. China's export performance in January and February was not very good and there was a time lag before it influenced Hong Kong's domestic exports. We have seen a major slowdown in exports to China." Domestic exports to China dropped 14 percent during the first two months of this year compared with the same period last year. The rate of increase in China's trade also slowed during the period. In U.S. dollar terms, trade rose 19.2 percent in the fourth quarter of last year compared with only 16.9 percent in the first two months of this year. (Hong Kong SOUTH CHINA MORNING POST (BUSINESS POST) 29 Apr 94 p 1)

Hong Kong Firms See Opportunity in PRC Funding Cutback

According to a report by Peggy Sito, "China's decision to stop injecting capital into struggling mainland businesses" has opened up a "treasure chest of bargains" for Hong Kong-listed companies, which have been the first to spot buying opportunities. Nick Ni, economist and associate director at stockbroker Nomura International (Hong Kong), said state companies had been actively courting funds from overseas firms as well as Hong Kong-listed, China-funded firms to make up a funding shortfall caused by Beijing's latest clampdown on bank lending. Zhaoyuan Electronic Materials in Shandong was saved from bankruptcy when China Merchants' investment fund stepped in to form a $23.5-million joint venture. Guangdong Enterprises has also taken advantage of the government's squeeze on cash by investing in Foshan Transformer Works, a voltage transformer company, and in Xinhui New Building Material, a ceramics manufacturer in Guangdong. (Hong Kong EASTERN EXPRESS 25 Apr 94 p 36)

China Credit Squeeze Causes Hong Kong Firm To Scale Back, Shift Investment

China's credit squeeze has caused Hong Kong-listed Guangdong Investment to scale back real estate development activities there. Although the group expects to see its future earnings boosted by hotels and tourism in Hong Kong and China, the company said that due to "the changing demand for property in China, the group has toned down the scale of its non-core property development." Instead, the company was shifting its focus to Thailand. The group expects stable income growth from infrastructure projects, such as the company's investments in the Zhongshan Power Station, the Shiqi section of the Guangzhou-Zhuhai Highway, and the New Pak Kong Bridge in Qingyuan. Stable recurring income is also expected from the acquisitions earlier this month of the Guangdong Hotel in Tsim Sha Tsui and the Wharney Hotel in Wan Chai. (Hong Kong SOUTH CHINA MORNING POST (BUSINESS POST) 29 Apr 94 p 3)

Hong Kong Executive Sees Limited Impact of PRC Land Tax

A director of Hong Kong's New World Development Limited has said that China's purpose in drawing up a land value-added tax is to curb real estate speculation. New World has many

real estate development projects in China, which involve capital worth several billion Hong Kong dollars. According to the executive, the implementation of the land value-added tax will only slightly affect the company's investments in China. He indicated that returns on real estate generally amount to 50 percent, which he said was reasonable. Some people expected an 80-percent return, but this could not be achieved in other countries. (Hong Kong ZHONGGUO TONGXUN SHE 1206 GMT 25 Apr 94)

Guangzhou Closes 100 Foreign-Invested Firms Breaking Contracts

Guangzhou has closed over 100 overseas-invested firms which failed to meet their financial commitments. Of investments worth a contracted $80 billion, only $29.5 billion has been injected. Most of the firms had partners in Hong Kong, Macao, or Taiwan. These places account for over 85 percent of overseas funds. Unfunded, suspended operations were among those closed; and foreign partners who failed to leave when their joint-venture contracts came to an end also had their licenses revoked. Chinese partners who failed to keep their end of bargains were responsible for some closures. Guangzhou, Shenzhen, and Zhuhai special economic zones have also cracked down on overseas cheats. The 113 revoked licenses account for about 2 percent of overseas-funded firms in Guangzhou. Only 30 percent of the contractual foreign capital in Guangdong has been put into use. The province has approved 47,000 overseas-funded enterprises, and half have begun operating. (Beijing CHINA DAILY 22 Apr 94 p 2)

Fujian Initiates Inspection of Foreign-Funded Firms' Contracts

Commencing this year, Fujian's Foreign Economic and Trade Commission will annually inspect the implementation of the contracts and rules of foreign-funded enterprises. Fujian is the first province to take this action, which is aimed at protecting the legitimate rights of various parties and promoting the growth of foreign-funded enterprises. Of the 13,000 foreign-funded enterprises approved by the provincial authorities in the past 15 years, some 5,800 have gone into operation. Xiamen Special Economic Zone started inspections early this year. (Beijing ZHONGGUO XINWEN SHE 0925 GMT 21 Apr 94)

Canadian Telecom Firm Launches Five-Year, $130-Million Program

Northern Telecom of Canada has agreed to a five-year, $130-million investment program establishing three joint ventures and a high-tech laboratory in research and development, manufacturing, and sales and servicing of telecommunications switching products, semiconductors, and other technologies. The agreement was finalized between Vice Premier Zou Jiahua and Canadian Trade Minister Roy Maclaren in Toronto. Formal contracts should be signed late this summer.

This is the first phase of a memorandum of understanding signed by Northern Telecom and the State Planning Commission in June 1993 covering a broad range of manufacturing, research and development, technical, and training projects to help modernize China's telecommunications infrastructure. Northern Telecom will hold 40 percent of the stake of a manufacturing joint venture with Chinese partners in Shunde, Guangdong. It will undertake the design, engineering, manufacturing, service, marketing, sale, and installation of switching products. A research and development center will be set up to develop advanced hardware and software products related to telecommunications switching. Northern Telecom will hold 55 percent of a very large scale integrated (VLSI) circuit joint venture in Shanghai with Shanghai IC Design Corporation, which will design and supply integrated circuits for the Shunde venture and other electronics

manufacturers in China. The third project will be another VLSI circuit manufacturing project in Shanghai. Northern Telecom will purchase a 25-percent direct equity stake in the existing joint venture, Philips Semiconductor Corporation of Shanghai. The plant will provide VLSI circuits to Northern Telecom's joint venture in Shanghai. (Beijing CHINA DAILY 25 Apr 94 p 2)

Heilongjiang Imports Tire Production Line From Italy

The Hualin Industrial Group of Heilongjiang Province on 22 April signed a contract with an Italian company in Harbin to import a tire production line. The project, involving both technology and equipment, has been approved by the State Council. It is estimated that by 1997, this industrial group will produce an annual tire output of 4 million tonnes and create 400 million yuan in profits and taxes and $40 million in foreign exchange. (Harbin Heilongjiang Radio 2200 GMT 22 Apr 94)

Shandong's Yantai City Reports Foreign Investment Projects

Yantai city in Shandong Province has made marked progress in opening to the outside world. As of now, the city has introduced 101 large projects, each of which involves more than $10 million, and 154 high and new technology projects. Since the beginning of 1993, Yantai has signed contracts on building 142 projects with foreign investments worth $340 million, accounting for 25.9 percent of the total foreign capital brought into the province during the year. (Jinan Shandong Radio 2300 GMT 22 Apr 94)

Heilongjiang, ROK Jointly Invest in Sanjiang Plain

The Continent General Development Corporation of Korea, the Heilongjiang Government, and Heilongjiang Sanjiang Plain Agricultural Development Company Limited formally signed an agreement on taking a loan in U.S. dollars equivalent to 131.59 million yuan from the Korean side on 4 April. The funding for carrying out the largest Sino-ROK joint-investment agricultural comprehensive development project is now in place. Sino-ROK Heilongjiang Sanjiang Plain Agricultural Development Company was established on 17 April 1992; its subordinate enterprise, Touxing Farm, is located in Fujing City and covers an area of 570,000 mu. This project includes the development of 200,000 mu of land in 1993, another 200,000 mu of land in 1994, and the rest of the land by the end of 1996. The total investment is 227 million yuan, 170 million yuan of which will come from loans. The Chinese side is responsible for raising a loan worth 31.59 million yuan, and the Korean side is responsible for raising a loan in U.S. dollars equivalent to 131.59 million yuan. The annual interest rate for the loans raised by both sides will not be higher than 3 percent. The loan period is 20 years and the loans will be evenly repaid within 15 years, starting on the sixth year after the loans have been granted. The rest of the funds for this joint venture will come from bank loans. (Harbin HEILONGJIANG RIBAO 5 Apr 94 p 1)

Beijing-Japanese Electronics Joint Venture Established

Beijing No. 3 Radio Equipment Plant and Murada Corporation of Japan recently signed a contract to form the Beijing-Murada Electronics Company Limited in Beijing. With a total investment of $30 million, this company will mainly produce high-grade multilayered ceramic condenser sheets for various kinds of electronic machines. It is expected that this company will go into production in the second half of 1994. (Beijing BEIJING RIBAO 12 Apr 94 p 1)

Shenzhen Stock Exchange Now Open to Individual Japanese Investors

The Shenzhen Stock Exchange was officially opened to Japanese retail investors on 20 April, becoming the 37th stock exchange to be endorsed by the Japanese Securities Dealers Association. The Shanghai Exchange was approved by the association on 10 March. The Shanghai and Shenzhen exchanges were previously open to Japan's corporate and institutional investors, but individual investors will now be able to invest directly in B-share stocks listed on both exchanges, or indirectly through investment trusts. Shenzhen hopes to recruit major U.S. and Japanese investment houses to its trading floor as part of its plan to catch up with Shanghai. Japanese brokers believe Shanghai is likely to keep most of the business. (Hong Kong EASTERN EXPRESS 20 Apr 94 p 26)

Malaysian, Singapore Firms Invest in Xiamen Steel Company

Malaysian, Singapore, and Chinese enterprises have jointly invested $150 million in building a steel company in Xiamen, Fujian Province. The signing ceremony was held in Xiamen on 15 April. The company, which will have a production capacity of 500,000 tonnes of smelted steel and 500,000 tonnes of rolled steel, will go into operation in July next year. (Hong Kong WEN WEI PO 16 Apr 94 p a6)

Malaysian Company, Guangdong Sign Expressway Construction Contract

A contract was signed in Guangzhou on 21 April by Guangdong and a Malaysian company for the construction of a 180-km expressway from Yangjiang's Yangxi to Zhanjiang's Suixi, a section of the Foshan-Zhanjiang Expressway. The Malaysian company is responsible for raising the total investment of 6.68 billion yuan. Construction will start in the second half of 1995, and the project will be completed in 1998. (Hong Kong WEN WEI PO 22 Apr 94 p a3)

Swiss Pesticide Company Invests in Qingdao Farm Chemicals Joint Venture

Qingdao Pesticides Factory has signed an agreement with Ciba-Geigy AG to set up an $11.6-million joint venture in Qingdao. The Swedish company will hold 55 percent of Qingdao Ciba Agro, which will produce highly efficient farm chemicals. The joint venture is expected to begin operation in 1996 and will employ about 180 people. This is Ciba-Geigy's 11th investment in China. (Beijing CHINA DAILY 27 Apr 94 p 2)

Taiwan Industrial Village Established in Haikou Development Zone

A Taiwan industrial village covering an area of 2,000 mu was established in the Yonggui Industrial Development Zone of Haikou City on 7 April. The zone has good access roads and an adequate power supply. A 16-kilovolt-ampere special power transmission line will be installed by the end of April, along with a 120-gate program-controlled telephone capacity. Projects to be built in this industrial village include electronics, bioengineering, precision equipment, machinery, plastics, clothing industry, hydropower, medicine, and food projects. (Hong Kong WEN WEI PO 18 Apr 94 p a6)

Industrial and Commercial Bank of China Sets Up Branch in Alma Ata

The Industrial and Commercial Bank of China announced in Beijing on 20 April the official inauguration this month of a branch in Alma Ata City of the Kazakhstan Republic. This is the third subsidiary set up by the bank abroad, following the establishment of its Singapore branch

and Seoul representative office. The bank plans to open branches and representative offices this year in Hong Kong, New York, Tokyo, and London. (Beijing ZHONGGUO XINWEN SHE 0912 GMT 20 Apr 94)

Beijing Reports Quarterly Statistics on Foreign-Invested Enterprises

By the end of March, Beijing Municipality had approved the establishment of 8,158 foreign-invested enterprises, with a total direct foreign investment of $11.229 billion. An official from the Beijing Municipal Foreign Economic Relations and Trade Commission revealed that the number of foreign-invested enterprises that had started production had increased to 418, or 5.5 times the number in the same period last year. Foreign-invested enterprises are playing a more important role in Beijing's economic development. In the first quarter of this year there were more than 200,000 employees in foreign-invested enterprises, which produce an aggregate output value of 2.78 billion yuan. More foreign companies have established headquarters in Beijing, such as the U.S. General Motors Corporation, the Swedish ABB, and the German Siemens Company. Major projects, including the fifth route of the Beijing subway, have drawn the interest of foreign investors. In the first quarter of this year, Beijing's exports amounted to $558.97 million, an increase of 35.6 percent over the same period last year. Its imports and exports were basically in balance. (Hong Kong TA KUNG PAO 19 Apr 94 p 29)

Fujian Encourages Foreign Businesses To Develop Power Projects

Fujian has adopted a preferential policy encouraging foreign businesses to develop power projects. To guarantee reasonable returns, the terms for project development can follow international practice. Foreign power projects can be designed and managed by investors themselves, or the electricity authorities of Fujian can contract to build or manage them. The enterprise income tax for foreign power projects will be 15 percent. If a foreign business runs a Sino-foreign project for 15 years or more, it can, upon approval by the tax authorities, be exempted from the enterprise income tax in the first five years beginning from the year it begins to make profits and be exempted from half the enterprise income tax in the next five years. Where a Sino-foreign cooperative enterprise or a foreign-funded enterprise has difficulty paying tax after its two years of exemption from the enterprise income tax or after its three years of half-exemption from the enterprise income tax, it can, upon approval by the taxation authorities, have its period of tax exemption appropriately extended. All foreign electricity projects are exempt from local income tax. (Hong Kong LIEN HO PAO 22 Apr 94 p 21)

Guangdong First-Quarter Industrial Output Increases 21.08 Percent

Guangdong's gross industrial output value totaled 105.128 billion yuan for the first quarter, 21.08 percent higher than for the same period last year, according to the Guangdong Industrial Production, Marketing, and Major Product Output Monthly Bulletin. First quarter export value accounted for 26.99 percent and new product output value for 2.42 percent of gross output value. In the first quarter both the gross output value and the sales of heavy industry grew faster than those of light industry, while the gross output value and sales of the state-owned and collective-run industrial sectors grew slower than those of other economic sectors. There were 25-percent increases or decreases in fully 50 percent of the product categories compared with the same period last year, which indicates a readjustment of the province's industrial product mix. (Beijing ZHONGGUO XINWEN SHE 1332 GMT 10 Apr 94)

PLA-Run Enterprises in Shenzhen Make Profits

The 192 enterprises in Shenzhen run by the People's Liberation Army last year had a total turnover of 3.19 billion yuan, turning over 460 million yuan in profits and taxes and earning $33.394 million in foreign exchange. The most successful, Sanjiu Enterprise Group, which is run by the General Logistics Department, had a turnover of 2.45 billion yuan and made a profit of 320 million yuan. Another, Nanfang Pharmaceutical Plant, made a profit of over 100 million yuan. The following enterprises made a profit of more than 10 million yuan each: Jiuxing Printing and Packaging Center; Sanjiu Travel Service Company; Sanjiu Real Estate Development Company; Heli Science and Technology Development Company, run by the Commission of Science, Technology, and Industry for National Defense; and Great Wall (Huihua) Enterprise Group, run by the 42d Group Army. (Hong Kong ZHONGGUO TONGXUN SHE 0700 GMT 16 Apr 94)

Nearly 10,000 Foreign-Funded Enterprises Operating in Shenzhen

A Shenzhen City report said that by March this year the number of registered foreign-funded enterprises in Shenzhen had reached 9,676. Of the newly registered foreign-funded enterprises, 60 have registered capital of over 10 million yuan each, including nine with registered capital of over 100 million yuan each. In the first quarter, 36 Hong Kong, Macao, and foreign enterprises set up offices in Shenzhen, and 31 foreign-funded enterprises set up subsidiaries in the city. (Beijing ZHONGGUO XINWEN SHE 1217 GMT 21 Apr 94)

Guilin Liangjiang Airport Listed as National Key Project

The State Planning Commission has officially listed the Guilin Liangjiang International Airport project as a national key project this year. This project, with an investment budget of more than 1.4 billion yuan, is designed to serve large airliners such as Boeing 747's. The project began last July. The work done so far includes the movement of more than 3.06 million cubic meters of earth and stone, equivalent to 30.8 percent of the total site-leveling work. Meanwhile, the roadbed of the 25.6-km airport road system has been completed. The project is expected to be completed by October 1995. (ZHONGGUO XINWEN SHE 0711 GMT 13 Apr 94)

First Privately Operated Airport Begins Operation in Hainan

China's first privately operated airport, Chuncheng Airport in Tongza City of Hainan Province, started operation on 13 April after a successful test flight. The airport, built by a Macao businessman with capital of 88 million yuan, is five km to the northwest of Tongza City and covers 1,980 mu. Phase one of the airport project, which has been completed, includes a helicopter landing field. The airport is expected to accommodate four small airplanes and eight helicopters by late 1995, when phase two of the project is completed. (Beijing ZHONGGUO XINWEN SHE 1231 GMT 13 Apr 94)

Hunan To Import 110,000-Set Program-Controlled Switchboards

The Hunan Post and Telecommunications Bureau will spend $10 million in low-interest loans on importing automated switchboards with a 110,000-set capacity from Germany's Siemens Company for rural telephone development. The contract was signed in Changsha today. Since the 165 Telecommunications Project was launched, rapid progress has been made in Hunan's rural telecommunications undertakings. Now the rural areas have switchboards with a total

capacity of 280,000 telephones, of which automated switchboards are capable of handling 100,000. However, the present rural telecommunications sector is far from meeting social demand. The bureau raises funds using such methods as payment by installments and low-interest loans to develop rural telecommunications undertakings. (Changsha Hunan People's Radio Network 2300 GMT 14 Apr 94)

Shanghai Exports Increase 22 Percent in First Quarter

An official of the Shanghai Municipal Foreign Economic Relations and Trade Commission said Shanghai's export volume totaled $1.748 billion in the first quarter, an increase of 22 percent over the same period last year, with machinery enjoying the widest growth margin. He said Shanghai's foreign trade will keep growing this year, as the in-depth development of reform and the introduction of a uniform exchange rate for the RMB have offered enterprises the opportunity of fair competition and will in turn favor export trade. He also noted that Shanghai's export volume in 1993 totaled $7.38 billion, an increase of 12.68 percent over the previous year. (Hong Kong ZHONGGUO TONGXUN SHE 1010 GMT 20 Apr 94)

Jiangsu County Promotes Investment From Hong Kong

A representative of Jiangsu's Wuxi County says that Hong Kong's Ryoden Group will invest $25 million to build an air conditioner factory there. In November last year, CITIC Hong Kong, a subsidiary of China International Trust and Investment Corporation (CITIC), invested 220 million yuan to merge the shares of three industrial enterprises in Wuxi County: the Wuxi County special steel tube factory, the postal and telecommunications cable factory, and the Huada electrical machinery factory. CITIC Hong Kong holds more than 51 percent of each of the three factories. The county has 50 investment projects for foreign investors to select from, including industrial projects, infrastructure projects, and real estate. So far, the county has signed six contracts in Hong Kong involving a total investment of $12.55 million. (Hong Kong WEN WEI PO 13 Apr 94 p C3)

Hong Kong Bank Shifting Data Processing to Guangdong

Hong Kong Bank is to shift much of its data processing to Guangdong Province to escape high labor costs and a serious shortage of clerical workers in the territory. About 200 staff will be employed in the first phase of the project, and the move is expected to take place within the next two months. Hong Kong Bank has already imported mainland Chinese staff to work as tellers in Hong Kong. Citibank moved some clerical operations to Shenzhen in 1991, but "bureaucratic difficulties" forced it to move the operations back to Hong Kong shortly thereafter. (Hong Kong SOUTH CHINA SUNDAY MORNING POST (SUNDAY MONEY) 17 Apr 94 p 1)

Hong Kong Manufacturing Sector Continues To Shrink

Providing further evidence of Hong Kong's shrinking manufacturing sector, government figures show that industrial production and employment in manufacturing both fell last year. The index of industrial production in 1993 fell by 0.8 percent from 1992, with the largest decline registered in the chemicals, rubber, and plastics sector, which fell 9.9 percent. Production of metals and fabricated metal products was down 9.4 percent. However, the output of the printing and paper products sector rose 12.8 percent and the production of machinery, parts, and components rose 12.7 percent. Employment figures showed that 483,000 persons were employed in the manufacturing sector in December 1993, 14.4 percent fewer than last

year, while factory workers average earnings fell 5.3 percent. By contrast, employment in finance, insurance, real estate, and business services grew by 7.5 percent to 338,100, and earnings rose 9.7 percent. (Hong Kong EASTERN EXPRESS 16-17 Apr 94 p 27)

Taiwan

Cross-Strait Trade Slows in Wake of Boat Incident

In the wake of the Chien-tao Lake [Qiandaohu] incident, which claimed the lives of 24 Taiwan tourists, the Ministry of Economic Affairs [MOEA] on 19 April decided to temporarily slow the import of semi-finished products and agricultural and industrial raw materials from the mainland. The Ministry of Finance will also take measures to control cross-strait commercial exchanges. According to the MOEA, 1,788 kinds of mainland semi-finished goods and raw materials are currently allowed to be imported to Taiwan, and Taiwan had originally planned to deregulate the import of 2,500 more items this year. That goal seems unattainable now because of the incident. (Taipei CHING-CHI JIH-PAO 20 Apr 94 p 1)

Budget Frozen for Third Phase of Six-Year Plan Transportation Projects

Because construction of principal transportation projects under the Six-Year National Development Plan has seriously fallen behind schedule, the Directorate General of Budget, Accounting, and Statistics under the Executive Yuan has decided not to budget for the third phase of these projects for the time being to avoid expanding government debt. According to the Finance Ministry, the Central Government's outstanding loans totaled $24.1 billion by the end of March 1994, but it has only issued bonds worth $15.35 million so far. Among the unissued bonds, $7.9 million is allotted to the first and second phases of the aforementioned projects. (Taipei CHING-CHI JIH-PAO 14 Apr 94 p 1)

Low Growth of First Quarter Exports 'Surprises' Economic Cou[illegible]

To the surprise of the Council for Economic Planning and Development, Taiwan's exports in the first quarter of this year grew by only 0.4 percent amid global economic recovery. It seems that Taiwan's competitiveness in exporting to developed countries has also declined. Exports to the United States, Japan, and Europe dropped by 5 percent, 0.7 percent, and 8.3 percent respectively in the first quarter. Machinery imports in the first quarter were down 2.6 percent from the same quarter of last year. However, the export structure has continued to improve. Exports of heavy chemical-industrial products accounted for 53.8 percent of the total, and exports of electronics and electric appliances rose by 10.8 percent. Shoe exports suffered the hardest blow, with a decline of 48.4 percent. A researcher from the council said that Taiwan's poor export results could be attributed to competition from Mexico and mainland China or because exports from a third location have increased. (Taipei CHING-CHI JIH-PAO 17 Apr 94 p 5)

NORTH KOREA

Mt. Paektu Development Plan Experiences Difficulties

According to a South Korean government publication, North Korea has launched a study to turn the country's scenic Mt. Paektu region into a modern tourist attraction, but the actual development of the site has not advanced very far because of a lack of investment and technology, the country's isolation, and international tension due to the nuclear problem. A comprehensive study on the Mt. Paektu project reportedly began in 1988, when the DPRK government apparently conceived of the project as a way of earning foreign currency with relatively little investment and of bolstering the legitimacy of the regime by playing up Kim Il-song's and Kim Chong-il's links to the site.

As part of the development plan, the government has reportedly paved roads leading to the mountain, has been installing cable cars, and has begun the construction of tourist villages in nearby areas. However, progress at these sites has been slowed by a shortage of resources. Log cabin-style hotel construction at various sites around Mt. Paektu has also reportedly advanced slowly, and so far only a 47-room hotel on the mountain and a small tourist village have been completed. Total lodging capacity for tourists in the nearby towns has reportedly reached about 8,800 people. (Seoul NAEWOE TONGSIN 7 April 94 pp C8-C13)

SOUTH KOREA

FEATURE: Cooperation Between Rival Enterprises Booming

According to ROK press reports, South Korean enterprises are increasingly entering into cooperative agreements with their domestic rivals. Through such agreements, both parties can gain access to each other's technologies and expertise, reduce duplication of effort in developing new technologies, and move toward developing new technologies and products. According to one source, cooperation even extends to joint research efforts between civilian firms and government research institutes.

The 6 April CHUGAN MAEGYONG reported that recently there has been a "boom" in cooperation between "rival" ROK enterprises. The journal cited a university professor's comment that in the past coalitions had centered around production, while today's coalitions center more and more on sharing marketing and technology. Indeed, cooperation between competing enterprises has spread from simply buying each other's parts or sharing certain tasks to jointly developing core technologies. Examples of cooperation can involve ROK firms operating in the domestic market, ROK firms working together overseas, or even ROK firms teaming up with government research institutes to develop new technologies.

There are many cooperative arrangements between firms operating within South Korea itself, according to CHUGAN MAEGYONG. For instance, Samsung Group and Kia Group are cooperating on a concrete pumping vehicle and an eight-ton hydraulic truck crane. Samsung Heavy Industries will continue to maintain cooperative relations with Kia for commercial and

technological reasons, even as it begins producing commercial vehicles in May. In the airline industry, rivals Korean Airlines (KAL) and Asiana Airlines have agreed to use a joint ticketing system. In addition, KAL has moved some offices into the city air terminal in Seoul, even though it is owned by Kumho Group, the parent organization of Asiana Airlines. There is cooperation of a different sort in the petrochemical industry. In order to shake off the recession that followed excess production of petrochemicals, producers are working on an agreement to halt excessive competition and to cut and regulate production. Heavy machinery manufacturers are also cooperating by purchasing each other's domestically made parts. By using these parts instead of imported Japanese- or German-made ones, the firms can effectively cut their components costs by more than 30 percent.

The electronics sector is where cooperation between firms has flourished most, CHUGAN MAEGYONG reported. Thanks to a cross-licensing agreement between Samsung Electronics and Goldstar, the two companies can use each other's patented television technologies without compensation. The journal commented that this is of "symbolic" importance, because it has allowed the firms to stop investing in redundant technology development and move ahead with other developments. Last year Goldstar Industrial Systems and Kia Machine Tools used their core technologies to jointly develop an indigenous robot. Also, in a technology-sharing agreement between Haitai Electronics and Samsung, Samsung supplies product ideas and technology to Haitai, which commercializes and sells the new product. For its part, Haitai disburses to Samsung 1 billion won ($1.25 million) annually in technology fees. According to CHUGAN MAEGYONG, this is the first agreement in which domestic firms share product ideas rather than manufacturing technology. The journal opined that in the future there would be additional strategic coalitions of various types between ROK firms.

The 8 March HANGUK KYONGJE SINMUN reported an increase in manufacturers' efforts to cooperate on technology development. According to the daily, materials producers and consumers are working together to develop new materials or new products that use new materials. For example, Pohang Iron & Steel (POSCO), Pusan Pipe, Kohap Steel, and Kyongan Industries are cooperating on materials development. HANGUK KYONGJE SINMUN noted that thus far they have developed a material called 304N1 that is stronger and more corrosion resistant than existing stainless steels. Another example of such cooperation is Taehan Aluminum and Sam-young Electronics' success in developing an aluminum that is 99.999-percent pure. In addition to working to develop new materials, firms also often work to find uses for their discoveries. For example, Taehan Aluminum and Sam-young Electronics are working with electronics firms to develop manufacturing technologies for semiconductor components that would use their ultra-pure aluminum. In the steel sector, Kyoryang Housing plans to work with construction firms to develop strong structural materials and construction technologies, and thus increase the use of steel in the construction industry.

ROK firms are not just cooperating in the domestic arena. They are also working together to build a "common front" overseas, CHUGAN MAEGYONG explained. In these cases, firms feel they must cooperate to compete against foreign firms in overseas markets. According to the journal, there are more and more examples of domestic firms "clearing away" foreign firms and accepting joint orders for ships or construction projects. For example, in June 1993 Hyundai Heavy Industries and Samsung Heavy Industries joined forces to win a $260-million bid to build four oil tankers for India's state-run shipping company. Hyundai Construction and Ssangyong Construction joined hands and won a bid for a $620-million building project in Singapore. In Europe, ROK TV manufacturers are working with ROK parts manufacturers.

In addition to citing examples of cooperation between civilian firms, CHUGAN MAEGYONG reported on cooperation between civilian and government entities. The journal cited the

development of HDTV, one of South Korea's so-called G7 projects, as an example. In this case, the Korea Academy of Industrial Technology (KAITECH) worked with three civilian firms--Samsung Electronics, Goldstar Micronics, and Orion Electronics--to develop a 34-inch braun tube for use in an HDTV set. The development of the TDX is another example of civilian-government cooperation, according to CHUGAN MAEGYONG. The government's Electronics and Telecommunications Research Institute (ETRI) has worked with four firms over a long period to develop a TDX that could both satisfy domestic demand and be exported overseas. The government did so in order to set up a domestic telecommunications industry that would be self-supporting, the journal noted.

The following is a list of current cooperative arrangements between ROK firms, as reported by CHUGAN MAEGYONG.

Technical Cooperation

1. Goldstar-Samsung Electronics (patent sharing): share about 2,000 TV-related patents.

2. Goldstar Electronics-Kia Machine Tools (joint development): development of an indigenous robot.

3. Orion Electronics-Korea Tungsten Mining (joint development): development of rhemium tungsten wire.

4. Samyang-Pusan Pipe (joint systems management): set up and management of a computer system (set up, manage Korea ICM)

Production, Sales Cooperation

5. Samsung Electronics-Goldstar-Daewoo (joint production, sales): production and sales of large home appliances.

6. Samsung Heavy Industries-Daewoo Heavy Industries (parts purchases): purchases of each other's key machinery components.

7. Hwasung-Kukje-Kolon (joint marketing): set up shared salesrooms overseas, joint marketing.

Overseas Cooperation

8. Hyundai-Daewoo-Samsung (international bidding): joint order for Saudi crude oil tanker.

9. Hyundai Construction-Ssangyong Construction (overseas construction): joint order for Singaporean construction project.

10. TV manufacturers-TV parts producers (moving into European market): strengthened cooperation between parts producers, supply parts to TV makers.

Civilian-Government Joint Research

11. KAITECH-Samsung-Goldstar-Orion Electronics (joint development): development of braun tube for HDTV's.

12. ETRI-businesses (civilian-government joint development): development of TDX

FEATURE: KAERI Head Calls For Restructuring ROK's Nuclear Industry

The director of South Korea's Atomic Energy Research Institute (KAERI) complained in a recent press article about the possible impact of Uruguay Round (UR) limits on the ROK's nuclear industry and what he perceives as the "advanced countries'" efforts to restrict "proliferation" of nuclear technology. These potential foreign challenges must be met, in his view, by taking a fresh look at the structure of South Korea's nuclear industry from R&D to management, and by greater efforts toward indigenous nuclear development.

Sin Chae-in, director of KAERI, stated his views in the February Seoul WONJARYOK SANOP on how the "new international rules" could affect South Korea's nuclear development. According to Sin, the "Uruguay Round in part reflected the intention of the advanced countries to perpetually maintain the present system of advanced and backward nations." The new world arena, according to Sin, though called "equitable" and "cooperative," is really a "gruesome game in which people without power are forced to submit" to those with power, particularly to those who possess advanced technology. With the limitations created by the UR on the ability of less advanced countries to subsidize their own industrial technologies, and with other new "rounds" looming, "the most important thing for South Korea is to read the winds of change correctly" and act to protect itself.

Sin predicted that the December 1993 UR agreement would erode "the ROK government's ability to defend the country's beginning stage technology." According to Sin, special government subsidies to industry are to stop, with subsidies for technical development reduced from 100 percent of R&D costs to 75 percent. Although such restrictions do not apply to the nuclear industry as yet, Sin observed, their scope will probably expand, making it "urgent" for the ROK to work out "countermeasures" to protect its developing nuclear technology. South Korea has also signed the Government Procurement Agreement which requires companies located in signatory states, such as the Korea Electric Power Corporation (KEPCO), to open equipment and construction bids to foreign companies. The United States and Canada's "insistence" on opening South Korea's markets, Sin asserted, is a "sure sign" these countries plan to compete with South Korea in the domestic nuclear power market. Thus, not only is the ROK's "technical independence" in nuclear power threatened, so is its "nuclear infrastructure."

The KAERI director also expressed his dissatisfaction with efforts being made by the "advanced countries" to limit the spread of nuclear technology. In his view, "the moves toward strengthening the international nuclear non-proliferation system going on now in international atomic energy circles can also be seen as part of the tendency" of advanced countries to "control" those less advanced. In this "David vs. Goliath" world, South Korea must rethink all "pending problems" that pertain to nuclear power from a fresh perspective, including nuclear power administration, the "direction of R&D," and securing of nuclear materials. The strength to survive in today's world must come through technology based on indigenous R&D. According to Sin, "The era when technology could be copied from other countries has already passed."

KIST Develops Super-Smooth Automated Metal Grinder

The Korea Institute of Science and Technology's (KIST) electromechanical research division has developed a high-speed intelligent robot system able to finish-grind metal materials three

times faster than existing equipment with double the smoothness. Instead of using a conventional zigzag motion, KIST's device uses a computer-controlled "directionless grinding pattern" that increases surface smoothness from 9 to 4 microns (one micron = one millionth of a meter). The system reportedly functions exceptionally well in corners "and on curved surfaces."

KIST claims the robot performs better than competitive machinery made in Japan, which reportedly is mechanically controlled, requires more manual operations, and can be used with only a limited number of shapes. KIST, a government-funded institute within the Ministry of Science and Technology, recently contracted to transfer the technology to the South Korean firm Hwacheon Machinery Works, for which KIST will receive a two percent royalty on earnings until 2001. (Seoul HANGUK KYONGJE SINMUN 22 Mar 92 p 17)

Corporate Technical Colleges 'Rapidly Increasing'

The number of colleges established within ROK industrial enterprises is rapidly increasing, as South Korean companies seek to train a cadre of professionals able to deal with the challenges of internationalization. At present, 29 such facilities are offering undergraduate and graduate level programs to some 3,000 employees; another 4,000 have already graduated. Instruction is practically oriented with an emphasis on technologies of interest to the company. Although graduates do not receive degrees honored by society, they are treated within the company the same as employees with regular diplomas. College and junior (technical) college level programs running one to four years are offered by 25 major South Korean firms. Four companies--Samsung, Hyundai, Korea Telecom, and the Korea Electric Power Corporation--offer two-year graduate programs with courses in foreign languages, computers, factory automation, management, information science, communications, and a wide selection of engineering courses. Faculty are drawn from nearby colleges and are supported by employees with advanced degrees. (Seoul CHUGAN MAEGYONG 13 Apr 94 pp 44-47)

ROK Chip Makers Shifting R&D to Non-Memory Devices

South Korea's three major semiconductor manufacturers are pressing ahead "full-scale" with plans to become world class producers of non-memory chips. Samsung Electronics is investing 96 billion won ($120 million) in non-memory R&D this year, doubling last year's amount. The company will use its Kihung laboratory exclusively for application-specific integrated circuit (ASIC) research, and is setting up its Suwon lab as a "design research facility for high value-added set ASIC's." Gallium-arsenide and special purpose chips are being developed through Samsung's U.S.-based subsidiary (formerly Harris Microwave Semiconductor) and through a joint venture with the U.S. firm Array. Samsung expects to increase its ratio of non-memory to memory chip sales from 20 percent at present to 40 percent by 1996.

Hyundai Electronics will dedicate its No. 2 laboratory at Inchon to non-memory semiconductor research, and devote "most of its efforts" to developing high value-added products, such as chip sets for computers, reduced instruction set computing chips, and semiconductors for use with optical-electronic devices. Domestic research will be enhanced by the transfer of personnel from the company's U.S.-based facility in Silicon Valley. Hyundai is also setting up non-memory design centers in the United States and Taiwan, and plans to expand "exchanges" with foreign technical personnel. Goldstar Electron, for its part, has raised its non-memory semiconductor sales target 300 percent over 1993. Production will be facilitated by the introduction of inspection equipment worth 50 billion won ($62.5 million) by the end of April. (Seoul HANGUK KYONGJE SINMUN 3 Mar 94 p 10)

ROK Government Body Facilitating Transfer of Advanced U.S. Technology

South Korea's Small and Medium Business Promotion Corporation is helping transfer advanced U.S. electrical, electronic, and computer technology to ROK firms by acting as an intermediary for Silicon Valley-based U.S. companies "looking for overseas partners." The ROK government-affiliated corporation recently received information through "a U.S. organization specializing in technology evaluation and technology transfer" about seven Silicon Valley firms that are seeking foreign cooperation on a number of high-tech projects. These projects include joint investment on a device to detect impurities in liquids; technical partnership or joint investment in a phone system that combines automatic answering and voice mail for private telephone exchanges; and technical partnerships for the following: wireless data communications for new, low-cost personal computers; a commercial sprayer for high-density coatings on automobiles; a remote control switch for household electrical appliances; a computer main disk; and a high-resolution projection display. The corporation expects to receive 5-6 references per month from the U.S. organization, which it will match up U.S. firms with the appropriate small and medium-size South Korean manufacturers. (Seoul HANGUK KYONGJE SINMUN 2 Apr 94 p 10)

KTB, SSTC Set Up Joint-Venture Consulting Firm in Beijing

KTB Consulting and China's State Science and Technology Commission (SSTC) are setting up a joint-venture consulting firm in Beijing. The venture will be called the Longhan High Tech Development Consulting Ltd. and will be capitalized at $1 million. KTB will have a 60 percent interest in the venture and hold the managing rights, while Sinotechmart, an affiliate of the SSTC, will have a 40 percent interest. There are plans for 24 small and medium ROK businesses to invest $600,000 of KTB's investment share. Longhan will help arrange Sino-ROK joint ventures, technology transfers, trade mediation, and market surveys. KTB Consulting is also considering setting up a joint venture consulting company in Vietnam. (MAEIL KYONGJE SINMUN 21 Mar 94 p 10)

Kim Chang-tal, the head of Longhan, noted that the consulting firm will give ROK small and medium businesses a route by which to move into the Chinese market. He commented that previously these businesses had to depend upon their connections, and that their investments in China were of a piecemeal nature. Now, with the help of Longhan, they will be able to systematically assess the commercial soundness of their investment plans. This will help reduce investment risks and costs. The joint-venture consulting firm will work to find superior Chinese technologies and guide ROK small and medium businesses toward commercializing these technologies. In the long run, Longhan will set up a database which will include information (business and technological) on Chinese enterprises that could be potential cooperative partners for such ROK businesses. (HANGUK KYONGJE SINMUN 28 Mar 94 p 10)

Samsung Aerospace Establishes Research Center in Moscow

Samsung Aerospace Company has set up an ultramodern technology research center in Moscow, Russia. The center, located at the Moscow Institute of Physics and Technology, began full operations on 26 April. The center will employ 1,300 researchers, and bring together Russia's advanced technology in various industrial fields. With the establishment of the center, Samsung Aerospace will accelerate its technology development in advanced fields. (Seoul MAEIL KYONGJE SINMUN 27 Apr 94 p 9)

Researchers Develop Scanning Ion Microscope

A Kwangwoon University research team has developed the ROK's first "scanning ion microscope," used to make semiconductors, medical micro-robots, and other advanced products. The instrument, also called a "focused ion beam (FIB) system," has the functions of an electron microscope and microscopic processing equipment. The research team began the project in 1988 with 800 million won ($1 million) in university and government support. Advanced nations first developed the microscope in the mid-1980's. Currently there are only about 300 in use worldwide, nine of them in South Korea, although next year ROK demand is expected to reach 20 microscopes. If South Korea can produce the instruments domestically, it will be able to save about 20 billion won ($25 million) in import costs annually. (Seoul YONHAP 0213 GMT 21 Apr 94)

Researchers Develop Semiconductor for Mobile Telephones

After two years of research, a semiconductor research team at the Electronics and Telecommunications Research Institute (ETRI) has developed a GaAs (Gallium Arsenide) powered MESFET (metal semiconductor field effect transistor), a key component in making super-lightweight mobile telephones. The GaAs MESFET works on 3.3 volts, has a maximum output capacity of 1.6 watts, and has a power converting efficiency of 64 percent. Mobile phones currently on sale are equipped with 5.8- or 4.7-volt MESFET's. While the United States and Japan have developed integrated circuits for ultra-light cellular phones, they have been slow in their research of 3.3-volt MESFET's. The new MESFET will reduce the weight of a mobile phone battery to 30 grams, compared to current weights of 100 grams. Samsung and Hyundai Electronics will start manufacturing mobile phones equipped with the new MESFET in the latter half of 1994. (Seoul YONHAP 0514 GMT 21 Apr 94)

Hanil Scientists Develop Anti-Cancer Protein

South Korean scientists have unveiled an anti-cancer mutant protein, which they call Tumor Necrosis Factor (TNF) alpha mutein. The protein is the product of a three-year study on biotechnology applications by the Hanhyo Institute of Technology, which was set up in 1991 by the Hanil Synthetic Fiber Industry Co. to promote biotechnology and chemistry. Unlike other anti-cancer agents, the TNF protein causes no side effects, because it attacks cancer cells without harming normal tissue. Researchers claim the product is over 30 times more effective than existing tumor necrotizing factors. Laboratory tests on animals show the product is effective against breast, uterine, and larynx cancer. Hanil obtained an ROK patent for TNF last year and has filed for patents in the United States, Britain, Germany, France, and Japan. (Seoul YONHAP 0531 GMT 14 Apr 94)

Ssangyong Exports Mini-Diesel Generators to Philippines

Ssangyong Heavy Industries recently exported mini-diesel power generators to the Philippines. The company has supplied 3,500-kilowatt diesel power generator facilities, worth 2.4 billion won ($3 million), to the Philippine company Paper City. Installation is scheduled to be completed by the end of June. (Seoul MAEIL KYONGJE SINMUN 24 Apr 94 p 6)

Second Daewoo Mart Opens in Rangoon

Daewoo Corporation, the trading arm of the Daewoo Group, recently opened its second department store in Rangoon, Burma. The company opened its first store there in February.

The new department store, "Daewoo Mart," was built at a cost of $200,000. Myanmar Daewoo International, a textile maker set up by Daewoo, covered the cost. Daewoo, which opened its first office in Burma in 1985, exported $16 million worth of products to the country last year. (Seoul THE KOREA TIMES 24 Apr 94 p 8)

Hanil Synthetic Fibers To Operate Plant in Shandong

The Qingdao Hanil Spinning Co., Ltd., a joint venture between Hanil Synthetic Fibers and the Qingdao Number One Fiber Spinning Plant, will soon begin operations. Hanil placed two conditions on its agreement to provide the $5 million plant for the venture. First, it would be the sole provider of raw material to the Qingdao Number One Fiber Spinning Plant. Second, it would receive royalties equal to 4.5 percent of the new plant's sales profits for the next 10 years. The plant is expected to earn $19 million annually from sales. (Seoul MAEIL KYONGJE SINMUN 21 Apr 94 p 10)

Samsung To Export Mobile Telephone System to Russia

Samsung Electronics will export a mobile telephone system to Tumen, Russia. The system will include 6,400 lines of TDX-1B time division exchange and 1,600 lines of its modified TDX-10, developed with Samsung's own technology. It will also include a microwave transmission system and private switchboards. Samsung Electronics received the $20 million order in April 1993, and hopes to export more mobile telephone systems to Russia in the future. (Seoul MAEIL KYONGJE SINMUN 21 Apr 94 p 21)

Daelim Receives New Overseas Construction Orders

Daelim Industries recently received three overseas construction orders worth a total of $130 million. These include a power plant in Egypt, a gas processing facility project in Saudi Arabia, and a construction project in Brunei. The power plant order from the Egyptian Government is worth $63 million, and the project will last for 40 months. The gas project in Saudi Arabia is a joint venture with a U.S. company. The project will take 30 months. Daelim has also received an order to renovate a Shell company building in Brunei. (Seoul MAEIL KYONGJE SINMUN 18 Apr 94 p 29)

SOUTHEAST ASIA

INDONESIA

Oil Investment Continues Despite Falling Prices

The director of exploration and production for Pertamina says that investment in oil exploration has continued despite declining prices over the past few months. The government has introduced new incentives for foreign contractors to develop new fields in the frontier regions. Pertamina's 1994 target is to secure $600 million worth of investment in the oil and gas exploration industry. (Jakarta SUARA PEMBARUAN 30 Mar 94 p 4)

Textile Exports Increase; Value Declines

Department of Trade data shows that exports of fabric, yarn, and other textiles increased in volume by 20 percent to 441,240 tons last year from 367,560 tons in 1992, but a 22.5 percent decline in prices caused the export value to decrease 7 percent to $2.63 billion. Exports of garments rose 17.8 percent to 227,690 tons, but a 6.1 percent decline in prices caused their value to increase by only 10.6 percent to $3.5 billion. Revenue from the export of textiles and textile products increased by 2.2 percent to $6.13 billion. (Jakarta THE JAKARTA POST 8 Apr 94 p 8)

Export, Import of Electronic Goods

Department of Industry data shows that the export value of electronic goods rose by an average of 82 percent per annum from 1989 to 1992. Between January and November 1993, export value reached $1.083 billion. The import value of electronic components between January and November 1993 increased to $838.74 million compared to $261.75 million during the same period in 1989. (Jakarta SUARA PEMBARUAN 18 Mar 94 p 4)

Two-Way Trade With PRC Increases

Minister of Trade Satrio Budiarjo said that two-way trade between Indonesia and the PRC increased from $1.14 billion in 1990 to $2.18 billion in 1993. Indonesia's trade surplus with the PRC grew from $182.1 million in 1990 to $313.5 million in 1993. (Jakarta THE JAKARTA POST 6 Apr 94 p 9)

Taiwanese To Develop Petrochemical Plant

A 45-member Taiwanese consortium has agreed to build a petrochemical plant in Tuban, East Java with a $1 billion investment. (Jakarta KOMPAS 4 Apr 94 p 2)

Mitsui Petrochemical To Establish Manufacturing Plant

Mitsui Petrochemical Industries, Ltd. recently announced plans to construct a high-grade terephthalic acid manufacturing plant in Merak, West Java. The plant, which is expected to start operations in early 1997, will have an annual capacity of 350,000 tons. Mitsui Petrochemical will have a 45-percent share in this plant, the Chicago-based Amoco Chemical Co. 50 percent, and Mitsui and Co. the remaining 5 percent. (Jakarta KOMPAS 5 Apr 94 p 5)

Open Bidding Expected for Power Plant Construction

Samsudin Warsa, officer-in-charge of the East Java state-owned power company PLN stated that the government intends to use several contractors for the construction of the 800-MW thermal power plant in East Java. Samsudin said the company will soon open the bidding for the project. (Jakarta KOMPAS 24 Mar 94 p 3)

LAOS

Norway Grants Aid for Hydropower Project

A Norwegian Government representative recently signed an agreement with Lao Deputy Industry and Handicraft Minister Khammon Phonkeo, to provide Laos with $5.5 million in aid for the construction of the Nam Theun-Hin Boun Hydropower Project. (Vientiane KPL English 0911 GMT 20 Apr 94)

Swedish Organization Provides Development Loan

Swedish Charge D'Affaires Rolf Carlman, representing the Nordic Fund, and Lao Deputy Finance Minister Kikham Vongsai recently signed a $6.3- million loan for infrastructure projects, such as airport improvements, in Laos. The loan carries a low interest rate and a long-term repayment plan. (Vientiane KPL English 0800 GMT 27 Apr 94)

MALAYSIA

Trade, Investment With Sri Lanka Noted

The Malaysian Chamber of Commerce and Industry reported that bilateral trade with Sri Lanka reached $135 million last year. Malaysia exported $130 million in goods and services to Sri Lanka and imported only $5 million. The Chamber of Commerce also reported that, to date, 15 companies have invested a total of $50 million in Sri Lanka. These investments have been in the manufacturing, textiles, telecommunications, hotel, and catering sectors. (Kuala Lumpur UTUSAN MALAYSIA 31 Mar 94 p 2)

NEC Wins Fiber Optic Cable Contract

The Malaysian Telecommunication Company has awarded a $170.4 million contract to Japan's NEC Corporation to install a high-capacity fiber optic submarine cable system linking peninsular Malaysia with Labuan, Sabah, and Sarawak. The 2,332-km link, called the Malaysian Domestic Submarine Cable System, will utilize the latest optical amplifier technology. (Kuala Lumpur NEW STRAITS TIMES 16 Apr 94 p 13)

PHILIPPINES

Trade Agreements With Vietnam Signed

President Ramos recently signed five trade agreements with Vietnam, two of which are expected to generate $110 million in bilateral trade, covering imports such as rice, nuts, corn, and anthracite coal, and exports such as agricultural equipment, fertilizer, garments, construction material, and motorcycles. The other agreements involve infrastructure projects in Vietnam, joint-venture engineering-consultancy services, and a joint organic fertilizer research agreement between the Philippine Phosphate Fertilizer Corp. and the Vietnamese Institute of Agricultural Sciences. (Manila BALITA 31 Mar 94 pp 1, 2)

SINGAPORE

Japanese Firms To Expand Petrochemical Complex

Three Japanese companies have secured $1.2 billion in contracts from companies who are expanding Singapore's petrochemical complex. The contracts cover the engineering, procurement, and construction of a second ethylene plant by Petrochemical Corporation of Singapore [PCS] on Pulau Ayer Merbau and the construction of a new styrene monomer and propylene oxide complex--to be finished by mid-1997--on neighboring Pulau Seraya by Seraya Chemicals Singapore. PCS will supply feedstock to Seraya Chemicals, which is a 70:30 joint venture between Shell and Mitsubishi. The contracts, worth more than $600 million, are for the construction of an ethylene plant by JGC Corporation, offsite facilities and utility plants by Chiyoda Corporation, and plants to produce aromatics, methyl-tertiary-butyl-ether, and butene-1 by Mitsui Engineering and Shipbuilding. Shell has awarded the construction of the Seraya Chemicals complex to Chiyoda Corporation at a cost of over $600 million. Using mainly Shell technology, the complex is expected to be ready for start-up in the second quarter of 1997. (Singapore THE STRAITS TIMES 16 Apr 94 p 47)

THAILAND

Car Makers Get Export, Domestic Sales Incentives

The Board of Investment [BOI] has decided to spur the auto industry by extending promotional privileges to factories--not in Bangkok or its immediate environs--that produce cars for export and domestic sales. Plants in Zone 2 would receive a 50 percent tax reduction on machinery and a seven-year exemption from corporate tax on exported products. Zone 3 factories would be exempt from import duties on machinery. They would pay no corporate taxes for eight years and would get a 50 percent corporate tax exemption for an additional five years. They would also enjoy a 25 percent reduction in costs related to transportation, electricity, and water supply. Additional privileges would be given to companies exporting over 1,000 cars a year, including a tax reduction on local spare parts used to produce them. The BOI reiterated a pledge to encourage relocation of industries to the provinces. Auto plants doing so will receive corporate tax exemptions if they export products. (Bangkok BANGKOK POST 19 Apr 94 p 19)

Minister Comments on Energy Reserves

Industry Minister Sanan Khachonprasat said that the discovery of 42 petroleum deposits will enable Thailand to produce crude oil for the next 20 years and natural gas for the next 44 years. These reserves are worth $36 billion. (Bangkok Radio Thailand Network 0000 GMT 25 Apr 94)

Burma Buys Electricity for Border Town

Chunlaphong Chunlaket, governor of the Provincial Electricity Authority [PEA], disclosed that on 25 April the PEA signed a five-year agreement with the Shan State of Burma on the sale of electricity to Thachilek. The Burmese will pay what Thai consumers do--about 10 cents per unit. The agreement will be renewable on a year-to-year basis. Chunlaphong said that the PEA received permission from the cabinet on 22 April to sell electricity to border towns in Burma, Cambodia, Laos, and southern China. The volume for each sale will range between 500 and 2,000 kilowatts. (Bangkok PHUCHATKAN 26 Apr 94 p 4)

Firm To Open Cement Plant in Cambodia

Siam Cement Co will open its ready-mix concrete plant in Phnom Penh in the next two months according to Wira Phatanaphan, managing director of Concrete Products and Aggregate Co (CPAC) Ltd, a unit of Siam Cement. The plant has a production capacity of 60,000 cubic meters per year and will cost $800,000. CPAC Ready-mixed Concrete Co. Ltd. will own 40 percent of the project with another 40 percent owned by Cambodian banks. Annual demand for cement is forecast to rise by 15 percent annually. (Bangkok THE NATION 28 Apr 94 p B1)

VIETNAM

FEATURE: Mekong Delta Paddy Prices Decline Steadily

Press articles report a steady decline in paddy prices in the Mekong Delta. The government has implemented "emergency measures" to assure funding for rice purchases. Prices are below production costs.

The 17 March THOI BAO KINH TE SAIGON reported that since mid-February, Delta paddy prices have been declining steadily and "will continue to do so." In Vinh Long Province prices plunged from $2 to to $1.50 per bushel. The 6 April THOI BAO KINH TE VIET NAM published in Hanoi stated that by 5 March, prices had declined to less than $2 per bushel for good quality paddy and had fallen to $1.40 or lower in Dong Thap and An Giang Provinces. It was also reported that buyers are taking advantage of the situation to demand that peasants provide 22-kilo rather than the usual 20-kilo bushels. The paper stated that the winter-spring crop in the Delta's 11 provinces will yield 4.5 million tons or six metric tons per hectare according to Agriculture Ministry estimates. The paper reported on 30 March that despite some improvement in prices, they are still lower than production costs.

The 17 March THOI BAO KINH TE SAIGON reported that farmers claim the winter-spring crop this year has been the best so far, but buyers are scarce. State-run companies are short of funds to make purchases. THOI BAO KINH TE VIET NAM on 23 March called the Delta price decline "alarming" and noted that the government had decided to intervene.

The 23 March SAIGON GIAI PHONG reported that the Prime Minister had already issued an order for "the banks the finance sector to urgently act so that state enterprises in the south can obtain suficient loans to buy paddy from farmers." However, the article commented that, to date, nothing has been done.

In an effort to help the country's rice farmers, the government has also stepped in to assist rice exporters in purchasing rice. The 6 April THOI BAO KINH TE VIET NAM reported that the government had introduced a series of "emergency" measures. According to the paper, the government will allow the use of a price stabilization fund to partially subsidize interest costs for rice exporters. The level of support is the difference between the bank loan interest rate and the one percent per month interest the businesses have to pay on their loans. In addition, the government has ruled that the 14 major rice-exporting organizations in the South may use 70 percent of 1994's export quota. The remainder will go to lesser rice-export organizations. If these organizations find new customers and business conditions are good, then the Trade Ministry will issue export permits. The problem now, continued THOI BAO KINH TE VIET NAM, is to find enough cash to buy up the 2 or 3 million metric tons of paddy (about $300 million). Many rice exporters are already in debt to the banks, having suffered severe losses in 1993--some as much as $5.8 million--and it remains to be seen if the banks will make new loans. Reflecting the rice exporters' problem, the 23 March THOI BAO KINH TE VIET NAM had noted that as of mid-March, Vietnam had exported only 66 percent of 1993's totals for the same period.

Foreign Investment Projects Licensed in First Quarter

In the first quarter of 1994, 61 foreign investment projects capitalized at $707 million have been licensed. Since the promulgation of the Foreign Investment Law, the State Commission for Cooperation and Investment has licensed 908 foreign investment projects with a total capital of $8.311 billion. (Hanoi Voice of Vietnam 2300 GMT 17 Apr 94)

Prospects for Coffee Exports

Vietnam has exported more than 100,000 metric tons (MT) of coffee in the first five months of the financial year, indicating that last year's exports of about 128,000 MT will be exceeded. The 1993-94 crop is expected to yield about 135,000 MT, an increase of 5,000 MT over last year. (Hanoi VNA 1421 GMT 19 Apr 94)

Sugar Production Down; Imports Authorized

Due to a poor harvest, the production of sugar for 1994-95, including reserves, may only reach 85,000 metric tons (MT). The total demand is estimated at 25,000 MT per month. In the first quarter of 1994, the Ministry of Trade issued permits to import about 70,000 MT, half of it raw sugar. By October, sugar imports may rise to 80,000 MT. (Hanoi Voice of Vietnam 1100 GMT 18 Apr 94)

French Firm To Build Mill, Export Processed Rice

Aruco International, a French grain company, plans to build a $3 million joint-venture grain processing mill outside Ho Chi Minh City with a capacity to export 30,000 tons of processed rice annually. Aruco will contribute 50 percent of the capital to build the plant through its Singapore subsidiary, and "local capital" from My Tho, on the outskirts of Ho Chi Minh City, will make up the other half. The plant will be completed in May 1994.

The processing plant will parboil unhulled rice, which retains the nutrients, and then package it for export. While there is little demand in Asia for parboiled rice, there are good markets in southern Africa, Saudi Arabia, and Europe. (Tokyo NIKKEI SANGYO SHIMBUN 14 Apr 94 p 3)

Peugeot Prepares to Build Assembly Plant

Peugeot's representative for Indochina and Myanmar said the auto manufacturer will build an assembly plant in Hanoi. Investment is in the build, operate, transfer form. Investment capital will be $30 million, 63 percent of it will be supplied by Peugeot. Initial production is planned at 1,000 vehicles per year. Peugeot has been working with the Vietnamese company Formach on the project for more than a year. (Hanoi THOI BAO KINH TE VIETNAM 1994 special edition p 15)

Joint Venture With ROK in TV Assembly

Thang Loi Joint Venture Company (a joint venture between between ROK's Seyong and the Thang Loi company in An Giang Province) have entered into a television assembly joint venture with the Gold-Star group. The joint venture will start operations in April. It is capitalized at $6 million, and is expected to produce more than 100,000 units per year. (Ho Chi Minh City THOI BAO KINH TE SAIGON 26 Mar 94 p 3).

Foreign Loans Guaranteed by State Banks

The Governor of the Vietnam State Bank on 21 Feb 1994 signed Decison No. 23/QD-NH14 to guarantee capital loans made from foreign countries, in order to attract foreign investment and promote development of the country's capital market.

From now on, Vietnamese businesses will borrow foreign capital by getting and repaying their own loans. Businesses receiving foreign investment capital in accordance with the Foreign Investment Law will have their loans guaranteed by the State Bank and others authorized to engage in foreign operations. These are state-owned commercial banks, joint stock commercial banks, joint-venture banks, branches of foreign banks, and investment/development banks.

When a loan is reguaranteed by a second bank, there is a guarantee of full implementation of the original guarantor's commitment. Should the latter not fulfill its commitment, the loan will be repaid by the second bank. Businesses with a guarantee pay the guarantor banks a maximum of 1 percent per year of the covered amount. The fee to a second guarantor bank would be no more than .5 percent per year.

According to THOI BAO KINH TE VIET NAM--published by the Vietnam Economic Association--acting as a guarantor for foreign loans is an entirely new function in Vietnamese banking. It will help Vietnamese banks increase their competitiveness vis-a-vis the increasing number of foreign banks in the country. (Hanoi THOI BAO KINH TE VIET NAM 9 Mar 94 p 1)

Vietcombank Signs Credit Line With Korea Eximbank

The Bank for Foreign Trade of Vietnam (Vietcombank) and the Export-Import Bank (Eximbank) of Korea have signed a $10-million credit line, enabling Vietnamese businessmen to draw dollar credit from Vietcombank to purchase Korean capital goods. Repayment ranges from 3 to 10 years, with an interest rate of 5.95 percent. (Hanoi VNA 0604 GMT 27 Apr 94)